Price 25 Cents

THE AUTOMOBILE MAGAZINE

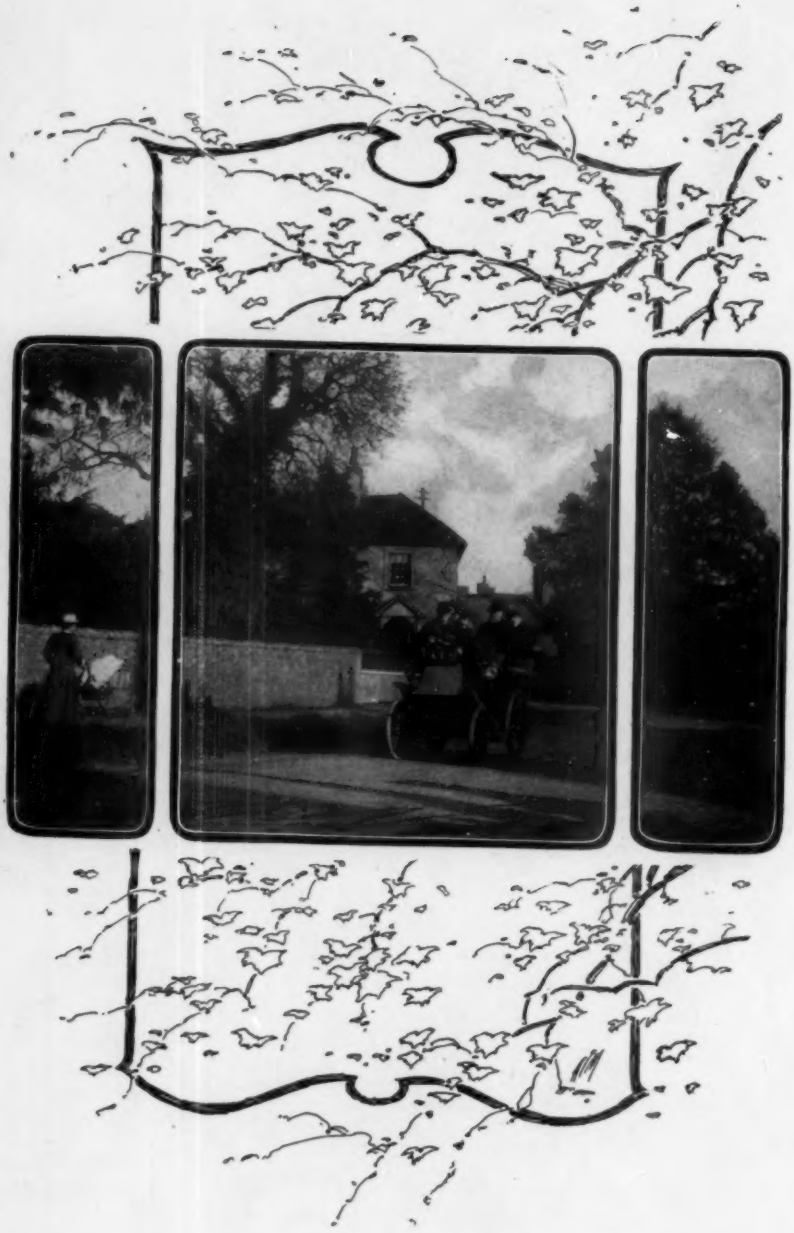
EDITED BY
ANGUS SINCLAIR

APRIL, 1902

Merely a Trifling Matter.

174 BROADWAY, NEW YORK, U. S. A.

Volume IV Number 4



THE AUTOMOBILE MAGAZINE

VOL. IV APRIL, 1902 NO. 4

A Sample of American Automobiling

By HIRAM PERCY MAXIM

AS with everything else, automobiling is more strenuous in Pittsburg than in most other cities. The down-town streets are a little worse and a little more greasy than down-town streets usually are. The hills are considerably steeper and considerably more unexpected in the abruptness with which they arrive at dangerous crossings than is considered strictly conventional. The street cars are a very great deal faster and more reckless.

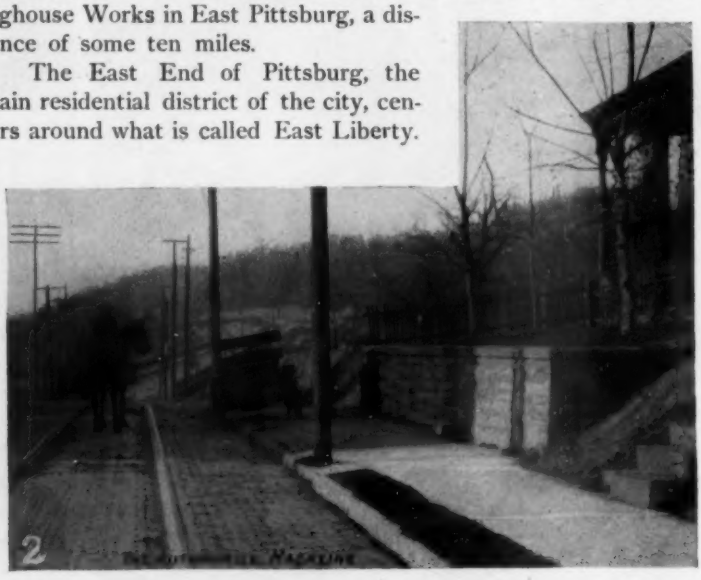
In the outer districts the streets are extremely narrow as compared with the equivalent in other places. Street car tracks occupy a much greater proportion of the entire street width. Curves are very much more frequent and sharp, and the grades are very much steeper and all-pervading than is usually the case. Ravines, gulches, precipices, cuts, and dead ends abound with the most remarkable frequency.

In the country beyond the suburbs the roads are what would be ordinarily called poor. They are of clay, practically impassable until late spring or early summer, extraordinarily crooked and

hilly, but extremely interesting withal. Coal mines, oil wells, gas wells, clay and limestone quarries, extraordinary railroad crossings, bridges, and river ferries, present themselves on every hand. To the automobilist educated in accordance with conditions existing in the well-regulated East, Pittsburg and vicinity offer more chaos and general strenuousness to the mile than he is at first capable of enjoying. Where he is inclined toward timidity, one experience is usually all that he indulges in. Thereafter he confines himself to residential streets where there are no street cars, or the parks, where the precipices are safely walled and the road conditions fairly good. Where he is inclined toward the adventurous, the pell-mell of it all, the chance and the risk that require a clear eye and a steady nerve, delight him, and he usually adds one more to the feverish Pittsburg street life.

An interesting sample of a Pittsburg automobile drive is found in the short one from the East End residential district to the Westinghouse Works in East Pittsburg, a distance of some ten miles.

The East End of Pittsburg, the main residential district of the city, centers around what is called East Liberty.



East Liberty is some five miles from the down-town district, or for a more definite spot, the historical old "Point" at the confluence of the two great rivers—Allegheny and Monongahela, where the great Ohio has its birth. On this historic bit of land the old original

block-house yet standing is the starting point from which Pittsburg and vicinity grew.

The larger Westinghouse Works, including the Westinghouse Machine Company, the Westinghouse Electric and Manufacturing Company, and the Westinghouse Air Brake Company, are located due east from Pittsburg, and are in the outermost suburban towns, or boroughs as they are called, of what is generally understood as the Pittsburg district. To reach any of these works from Pittsburg it is necessary to pass through several of the more closely lying towns, such as Wilkinsburg, Swissvale, Braddock, and Bessemer. Each town or borough has its own ideas of what is good enough for a highway, so that between them all, an automobilist has more than plenty of variety.

Leaving Pittsburg through East Liberty, the only route one can take, leads out the one fairly direct avenue that Pittsburg affords—Penn avenue. This avenue was the old turnpike that Geo. Washington surveyed and laid out as the main road from Washington and the West.

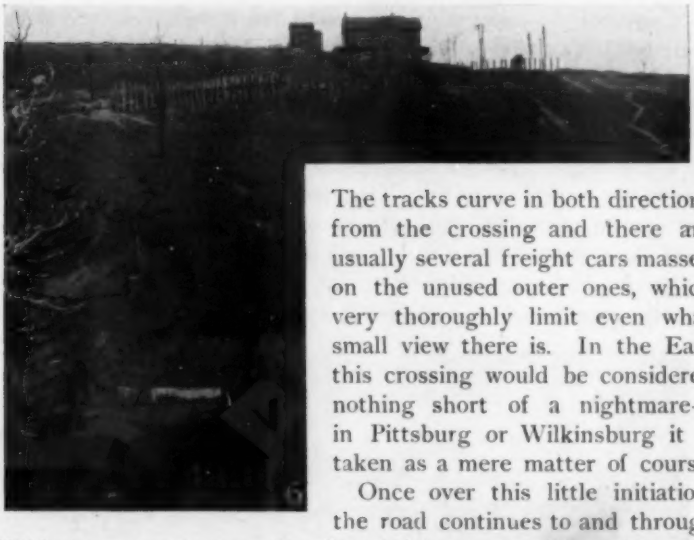
Approaching the city limits from Pittsburg, Penn avenue is a beautiful street, lined with luxurious and handsome residences of the Carnegies, Fricks, Heins, Hornes, Singers, and other wealthy Pittsburg families, and paved with very poor asphalt in a state of extremely bad repair. The street is occupied principally by two street car tracks, which leave no more than just a safe clearance for a vehicle between the curb and a passing car. In some places this safe clearance is reduced to an unsafe one in consequence of the street taking an abrupt angular turn and the trolley track having to follow it on a curve. The inside of this curve, as a result, approaches within something like thirty inches of the angle where the curb takes its

new direction. The combination forms an admirable pocket in which an overtaking car can catch and squeeze an automobile. But such a contingency is, furthermore, not as remote as might be expected, since the cars run very frequently, and between stops at as high a speed as thirty-five miles an hour.

The grades are normal for Pittsburg. This means, however, that there is always a grade one way or the other. They rarely average less than two per cent. For the last mile on Penn avenue leaving the city and approaching the city line, there must be a full mile of a steady two and a half per cent. down grade.

Passing over the city line into Wilkinsburg the street car tracks are left behind and the surface changes from asphalt to a fairly good brick. This lasts for about a quarter of a mile, when one is brought to the Pennsylvania Railroad crossing. This crossing is at grade, and the automobilist has the comfort of knowing

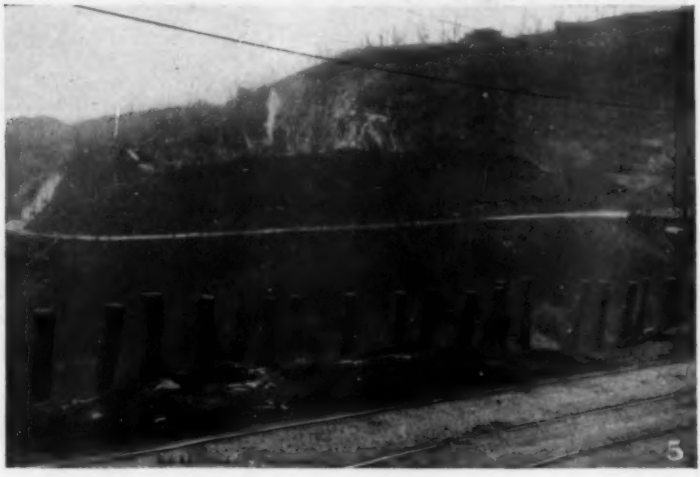
that there are ten tracks to be crossed, almost a continuous passing of trains, some of them express trains going at a very high speed, no gates, and only infrequently a watchman. The track crossings are extremely rough, making it necessary to run slowly over them if one is to avoid chancing a breakdown directly upon the railroad.



The tracks curve in both directions from the crossing and there are usually several freight cars massed on the unused outer ones, which very thoroughly limit even what small view there is. In the East this crossing would be considered nothing short of a nightmare—in Pittsburg or Wilkinsburg it is taken as a mere matter of course.

Once over this little initiation, the road continues to and through Wilkinsburg center over the vilest brick pavement that the automobile mind can conceive. The street car tracks are again encountered at Wilkinsburg center and remain with one the remainder of the route.

Passing through Wilkinsburg Penn avenue is maintained until



the foot of the hills, which surround the little valley, are encountered, when a sharp turn is made to the right. Penn avenue continues on, however, and disappears winding a crooked passage over the hills in the general direction of Baltimore and Washington. Along the foot of the hills the road runs through what is called Edgewood and Swissvale. The same succession of narrow streets and double street car tracks, sharp turns, dangerous pockets, and the everlasting succession of rushing trolley cars, obtains as elsewhere.

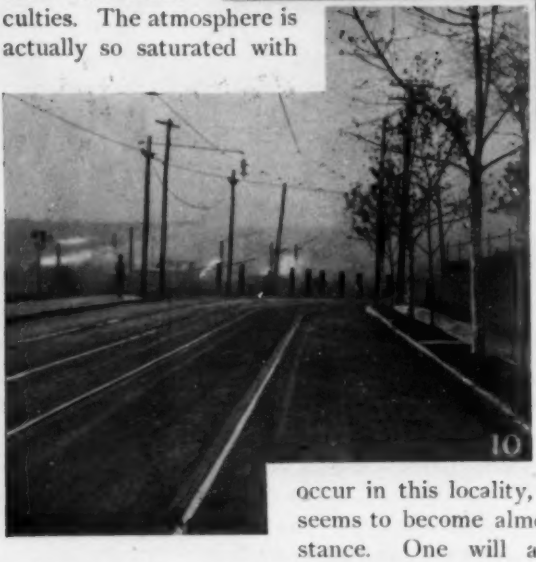
Representative of a very good portion of a part of this road is photograph No. 2, taken between Swissvale and Braddock. As will be seen, there is no room for a vehicle between the rail and the

curb. If anything happens to one's automobile, such as a broken igniter connection, or any other small detail that may require a stop, the driver must needs make a dive for the curb, mount it, and get at least half on to the sidewalk ere his engine stops or his vehicle loses its headway. If a halt is made once short of this position and the vehicle is a weight beyond a single man's strength to push over a curbstone, you are certainly in for it. At infrequent places there are crossroads. They are very rare, from the very nature of the country each side of the main street. There is usually an inaccessible hill on one side and a corresponding abrupt slope on the other, making any form of cross road ordinarily not only impossible but unnecessary.

In the photograph it will be noticed that the automobile had to be rushed over the curbstone and on to the sidewalk between the thickly planted telegraph and trolley poles. It is also of interest to note the effect of the grades as shown even in this photograph. There is nothing that is level. At the bottom of the dip in the middle foreground of the picture begins a bridge which spans a deep ravine. This bridge not only crosses the ravine at an angle but also has a grade of some three per cent. Also interesting, as is shown by the photograph, is the almost total lack of foliage on the trees. The photograph was taken during the summer season when the foliage should have been at its best. The majority of the trees are dead, due to the continuous smoky and sulphur laden air coming from the many furnaces in the vicinity.

Approaching Braddock more closely, the road winds and twists every few yards. In photograph No. 3 is an interesting example of the disregard of little conventionalities in this respect. The inner rail of the curve runs within six inches of the curb of an already badly abbreviated sidewalk, while the outer rail is guilty of the same offense on the opposite side of the street. The grade approaching this curve is fully four per cent. When two street cars coming in opposite directions and an automobile, and possibly a horse-drawn wagon, simultaneously approach one of these interesting spots, the driver of the automobile usually has a job of prestidigitating on hand, which, even though successfully accomplished, does not always avoid a general mix-up, calling for considerable profanity on the part of both motormen and the driver of the horse-drawn wagon. What would be the result at any one of these points were the street traffic even fairly crowded cannot even be imagined.

Passing the main street, which runs down off the hills into the center of Braddock, the smoky atmosphere becomes more dense, and if the automobilist has not already provided himself with glasses he begins to experience severe difficulties. The atmosphere is actually so saturated with



cinders or specks of dirt that it is almost an impossibility to attempt to drive a motor vehicle of any kind without some protection for the eyes. On foggy mornings, which frequently occur in this locality, this dirt in the air seems to become almost a tangible substance. One will always find, after completing a drive through it, that if there is the slightest crevice in one's wraps through which this air can find its way and impinge upon a piece of white linen, a dark blur will be formed very similar to the dirt blurs we frequently see deposited around ventilating air pipes.

Leaving Braddock, the street approaches Bessemer and the grades become rapidly worse, and the scenery, notwithstanding

the general mirkiness and chaos, really imposing. An example of the general effect of things is shown in photograph No. 4. The road from Braddock going east is shown in the right of the picture, with one of the inevitable trolley cars dashing up the grade. On the left is the great Edgar Thompson Steel Mill of the old Carnegie Steel Company, now the United States Steel Corporation. The main line of the Pennsylvania Railroad shows in the middle ground. The usual dense clouds of smoke and cinders is seen pouring from the stacks of the mill and blowing on before the west breeze to add its quota to the general haze.

The Monongahela river lies just beyond these works and can almost be seen in the photograph. Historic old Turtle creek flows into the Monongahela at what is just about the left edge of this picture. The ground is intensely historic, as it was over this precise spot that General Braddock, accompanied by George Washington, met his defeat and rout when marching on Fort Duquesne in 1775. Braddock's army was marched over the ground which is represented by about the center of this picture, and was approaching the hollow shown in the foreground when ambushed by the French and Indians from the sides of the ravine, to be described later. The battle and rout took place between what is now the railroad track and the steel mill. It is related by the contractors who built the foundations for the mill, that many interesting relics of the battle were found when making the excavations.

In photograph No. 5 this hollow or ravine is shown more completely. It is the most dangerous place on the whole road for both the trolley car and the automobile. The trolley tracks leading out from Braddock and Pittsburg turn up the hollow a short distance,

then cross the bridge just visible at the right of the photo, after which they return on the near side as shown in the foreground. This makes a well outlined "horse-shoe" curve.

Starting where the trolley car is seen in photographs 4 and 5, the grade is steadily up throughout the entire "horse-shoe," averaging fully five per cent. the entire distance. The immense limestone quarry seen in the background assists in furnishing limestone for the steel mill.

In photograph No. 6 the end of the curve is shown and a car is seen which has just completed the entire "horse-shoe." An idea of the continual grade can be seen from this photo, as also the piling necessary to keep the street from slipping down the hill or any runaway car from going over the hill should it jump the track at the curve. Some day some automobiler will owe his life to these piles.

In photograph No. 7 is shown the bridge, the grade on which it stands and the character of the bottom of the hollow. The houses are occupied by men from the Edgar Thompson Mill.

The character of the roadway is shown by photograph No. 8. The only road is that which lies between the rails of the street car track. It is no easy matter for any heavily laden vehicle to get out of the way of overtaking cars, as is seen in the photo. In the running of cars down these grades extreme care is necessary to avoid disaster. Derailing switches, set normally to derail a car,

are provided at the bad curves. When approaching one of these derailing switches, it is necessary that the car come to a dead stand still to enable its conductor to run ahead to the switch, close it and hold it closed until the car has passed over. The switch is fitted with a spring which automatically opens it again afterward.

In photograph No. 9 a car is seen in the act of passing over one of these switches. Should a car get beyond control at this particular switch, it would plunge up the hill shown in the right of photo No. 9 instead of over the bridge and down into the ravine.

Photograph No. 10 shows this piling and the curve as it appears where approaching along the roadway. The steel mills are seen in the distance.

A half mile more and another dangerous curve and hill are encountered, and this time the last one which leads down into East Pittsburg. After turning a corner fully as bad as that shown in photograph No. 10, the road opens up and now shows "Westinghouse Valley." The air as usual is always murky, making the photographs of distant objects impossible to get clear. The works of the Westinghouse Electric and Manufacturing Company are seen in the background, and a train of ore cars on the Carnegie Company's railroad—The Pittsburg, Bessemer & Lake Erie—running along one shelf lower down the face of the hill and incidentally adding its quota to the general smudge.

The road running down the hill is a steady decline of about six per cent. Only that portion between outer rails of the car tracks is it possible to use.

Photograph No. 11 shows the close chances that must be taken. The edge of the hill comes directly to the edge of the outer rail. An automobile driver passing down such a place as this, and being forced to take this outside track in order to pass cars coming up the hill, cannot help thinking of such things as steering connections and steering axles. Any break-downs of any of these parts at such a point would mean either a plunge into the up-coming trolley car or over the hill on to the rocks below.

On several occasions I have heard of front steering wheels seizing on their axles on account of lack of lubrication. Such a thing invariably produces a lunge to the side of the vehicle having the tight box, regardless of any steering maneuvering that can be done. Such an incident on the road in question would be bound to result disastrously.

Piling is also made use of on this hill to hold the roadway from slipping down. This is shown in photograph No. 12, in which also the Westinghouse E. & M. Co. works are more plainly seen.

Finally, at the very foot of the descent, a turn must be made around a corner on a thirteen per cent. grade, the steepest of the entire run. This is an extremely difficult corner for an automobile. Coming down it is all right, as cars can be easily dodged; but going up, when one's engine is at the best struggling hard, with the cars rushing down past this corner at any speed up to thirty miles an hour, it is extremely hazardous; the greatest caution is necessary in taking this corner on the way up. On one occasion the writer avoided a bad smash up only by a few inches, and that only by reversing full power backward down this thirteen per cent. grade.

This completes about as strenuous a ten-mile automobile ride as one can find available in any of our large cities. Taken just before business it serves as an admirable awakening for a busy day and repeated after business gives an exciting finish.

Thoroughness of French Workmanship

By C. R. Mabley

EVEN the French designer and constructor did not hit upon the perfected automobile of to-day by accident. The French automobile is the result of long experimenting and thought devoted to each and every part, from the pin and lock bolt and washer, to the cylinder casting and piston rings.

As the direct result of all this study of detail nowhere else in all the world is there produced an automobile which can claim to equal those of the best French makers. No unimportant factor in the arrival of the French vehicle at its present high standard has been the fact that many of the best engineers and inventors in France have given and still give their entire thought and effort to the perfecting of some one detail of the vehicle, never abandoning their labors over it until they have succeeded in making it as closely akin to perfection as it is given to man to accomplish in such matters.

It is the assembling or collecting together of these individually perfected sections which has given the properly equipped constructor abroad the prestige he undoubtedly has To take all this from the French maker will not be an easy task. To do so will entail the employment not only of the very highest grade of mechanics, but of designers, constructors and the like. Nor do I believe that for the present, at least, can one expect to overcome the reputation the painstaking foreign hand-work by even the most perfect of automatic machinery. I have found that best of the foreign automobile plants are, strange to say, equipped with a large percentage of these very same American machines. In explanation it will be said, perhaps, that the more satisfactory work of the foreigner is due to the better use he makes of American machines than the American workmen. I hold no such opinion, however, believing the only difference in the results produced is entirely due to the foreigners' more judicious use of the American machinery. Right here is another peculiar condition of affairs.

The French constructor utilizes a number of American machines in automobile manufacturing that our manufacturer will not or, at any rate, does not have in his factory, despite the fact that such machines may be bought right at hand. If the American maker had to go farther for his machinery he might, perhaps, study his requirements a little closer, and as a result of doing so invest more extensively in well selected machines to aid him in improving his product.

As I have noted, the foreign vehicle is the result of properly grouping the various products of specializing. Abroad the best automobile is rarely made entirely by the manufacturer whose name and guarantee it bears. For example, Panhard does not make the springs he uses. Renault buys his motors. Daimler declines to construct a body.

When it comes to the material entering into the construction of a vehicle the foreigner is extremely particular. He will have none but the best, utterly regardless of where it comes from or what its cost may be. So we find French steel in springs and axles combined with American hickory in wheels. All of this tells in the grand result, and when one recollects it the ability of the French vehicle to go the route and to withstand the terrific strains of doing so ceases to be a mystery. The best vehicle can only come from the most skilful use of the best talent, the best machinery, the best workmen and the best material.

The long start the Frenchman has over every other maker of motor vehicles cannot be overcome in a day, nor in many of them. It must not be assumed from this, however, that his premiership in the world of automobilism is a fixed and unalterable thing. I am too good an American and have too thorough a knowledge of the American character, which never allows itself to rest in a secondary position, no matter in what connection, to believe anything of this kind.

Another thing which has greatly aided the French maker in perfecting the vehicle he builds is the close attention he pays to the wants and to suggestions of the purchaser. Even though the man who uses an automobile solely for the pleasure to be gained from it may not have any special mechanical knowledge, yet he is often one of the keenest of critics as well as one of the most helpful. The French maker early recognized this, acted in accordance with his recognition and has advanced accordingly.

Your pleasure driver cares not so much what his automobiling costs him as he does what amusement it gives him. He insists, and rightly, too, upon the maker in return for his money supplying him with a vehicle which will take him wherever he may want to go and one capable of safely bringing him home again in at least as comfortable a fashion as he has been used to experiencing when he has used a horse-drawn vehicle for a similar purpose. All this, however, he expects to do in from one-half to one-fifth the time he was forced to lose when using a horse. The French maker sees to it that these requirements are not only met, but exceeded.

Each day sees in automobiling a demonstration that the theoretically perfect is often the practical failure, while the greatest absurdity in theory often proves of an inestimable value in practice. This is another lesson we must learn and profit from as they have done abroad, and neither the learning nor the profiting is going to be quite as easy a matter as one might think.

At present French superiority in design and construction is a condition, not a theory, to be met with and overcome. Let us meet it, then, by allowing the foreigners to teach us what we must learn and which they already know. By doing this in a little while the French type of automobile made in America will, I am sure, show wondrous results.

Maud Muller Motored

Maud Muller, on a summer's day,
Grew weary of heaping up the hay,
And said, as she looked at her bare feet brown,
"I think I better walk in to town."

Then the judge came a-scorching along that way,
In his new gasolene, and to her did say:
"Come get in, Maudie, and take a ride;"
And soon she was sitting close to his side.

Now, the judge's wife had hair of red,
And she had forty fits as they past her sped—
It was an innocent frolic, of course,
But wifey's suing him, all the same, for divorce.

A Pastel

WHOOP! Hello, there's another horse who has been unable to retain his foot on the slippery asphalt and has fallen down!

How quickly the crowd gathers! Everybody in this crowd has seen many a horse fall down in the street before, but the spectacle always draws them together just as if it were something absolutely new each time. The probability is that each one in the crowd, too, has some important business that requires immediate attention, but everything has to slide for the time being—for a horse has fallen down in the street!

The horse hasn't hurt itself. On the contrary, it rather seems to enjoy the recumbent position, if anything, and if it makes a movement to rise, it is evident only because its sense of duty impels it so to do. A horse's sense of duty is exceedingly acute. Didn't you know that? Why, yes. In the crowd there are two or three men who are familiar with horses. They know exactly what to do. At the animal's movement to rise they rush forward and sit on its head. All applaud, recognizing instantly that they have done precisely the proper thing.

On the outskirts of the crowd is the motor delivery wagon of one of the big dailies which has been brought to a standstill by the crowd of onlookers surrounding the fallen animal. Seated on the front seat of the automobile with its driver is a small boy, an ignorant small newsboy with tattered habiliments, a gamin, an Arab. Poor, half-starved, ignorant small boy!

The ignorant small boy listens to the discussion. What can he know about it? What education has he had, what advantages? Pish!

Nevertheless his voice rises high and shrill on the cool, clear air. He speaks:

"Aw, youse mugs, w'y doncher git up offen de nag's head an' let it git up?"

How strange! They hadn't thought of that before!

'Tis done.

The steed arises and proceeds upon its way.

The crowd disperses and the delayed motor wagon with a clang of its big gong shoots away on its long journey uptown.

Pleasures of Policing Traffic

By James Renfrew Rodgers

He was only a policeman, but he received $1,200 per year for standing eight hours a day at a corner where the tide of traffic more fiercely swirls than it does in any other place in America—at Twenty-third street and Fifth avenue.

An easy way to earn a hundred dollars a month, say you? No. To receive that paltry three dollars or more per day that big, broad shouldered, kindly faced, ever attentive giant risked his life a hundred times and saved the lives or limbs of hundreds of pedestrians who would otherwise have found themselves overpowered by the press of traffic at this point congested.

"Have automobiles added much to the dangers of street traffic?" the big giant was asked during a temporary lull in the performance of his perilous duty.

"Not only have they not increased the danger but they have positively added to the safety of the streets. You see there isn't any likelihood of an automobile raising on its hind wheels while beating your brains out with its fore ones, while to dodge this very trick with horses is a regular part of my duty here. It will be a blessing when the day comes that those who have to cross or travel upon the streets have only automobiles to threaten them.

"Yes, it certainly does get a bit confusing here when we have what you might call our regular trade mixing things up. Pretty bad just now? No, indeed, if it was I wouldn't be here talking. Want to see what we call our regular dose of discomfort here?"

Then there was a fumbling in some mysterious pocket in the tails of the giant's great coat, and the picture by F. T. Richards herewith reproduced was pushed into the writer's hand.

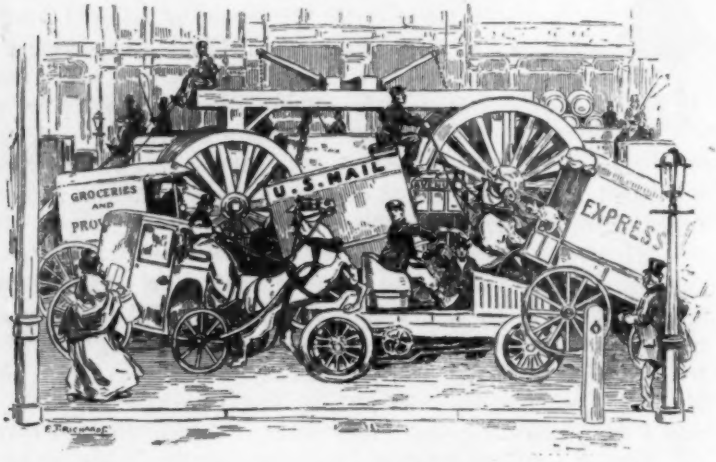
"Now that's ————," but the conversation was here interrupted while the giant went to remonstrate with a couple of irate drivers who had stopped the regular flow of traffic to indulge in the social amenities of their professions.

"As I was about to say," continued the bluecoat when he had returned after setting things going again, "that's the New York

Herald's idea of a quiet afternoon here on the avenue, and let me tell you it's a mighty sight nearer being true than I'd like to have it. The man that drew that knew his business, he did.

"What sort of vehicle gives me the most trouble? First, delivery wagons from the big stores, for they are always rushed along, and next the private carriages, drawn by prancing horses, with the coachman a-dreaming how grand he is and how fine the people are he has inside. But from horse car to truck all give trouble enough. Yet I have not had a person hurt in the two years I have had the crossing.

"My first rule is that it is always safer to cross behind a



vehicle than before the horses' heads, so you don't see me doing the bridle grabbing act very often. Another thing I believe is that one-half the women, although they rush past in such a businesslike way, are only out to kill time, and with no real thought of buying anything. So I don't mind holding a group of 'em back to let a wagon or a car pass, for they might as well waste five minutes here as in turning over goods at a shop counter.

"Fine days my work is always the easiest, for every one moves quickly then, and shoppers, drivers, and even the horses are good-natured. Rainy, foggy days are the worst, for the dirtier the walking the more women there are out, for some reason that I can't understand. Then they all carry umbrellas to push into my face

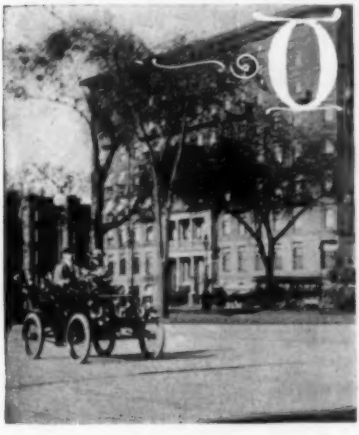
and into each other's faces, and between opening and closing gamps for women at the car steps and keeping the wet and rain-blinded horses from walking on 'em, I have my hands full.

"And I'm regarded as a sort of walking directory, besides. I have to know the exact location of every store, big or little, in the shopping district, as well as the hotels, theaters, ferries, railroad stations, and countless other things. Sometimes I think that when a shopping woman isn't shopping she is thinking up questions to ask the policemen. But women are too cute to say a word unless safe on the sidewalks, which is one reason why it is easy to pilot them over the crossing.

"There comes the sergeant, and if he catches me talking to you it'll mean ————" The remainder of the sentence was lost in the war of traffic as the big fellow once more calmly plowed his way through it, convoying a lot of women and children safely across to the opposite sidewalk.

The Downfall of Mr. Pratt

By F. K. Hamilton



ON Mr. Aaron Pratt's family going to the Ferry for their usual summer outing, they left him to the mercies of a restaurant and a lonely house. Their exodus, however, excited no feeling whatever within the india-rubber bosom of Mr. Pratt. Nature having sent him into the world with sealed pores, he went through life without receiving impression from anything he saw or heard.

"Sheds talk as a duck sheds water," was the comment of an exasperated son-in-law.

Happy Mr. Pratt! A good, kind, harmless creature, who, as unemotional as an oyster, and knowing as little of life as a cloistered ant, escaped that friction of mind which keeps the less fortu-

nate individual in a ferment of unrest. He was an apologetic-looking little man, with blue eyes, and reddish hair which hung about his head in ringlets. Although he had been married, and was blessed with children and grandchildren, it is safe to assume that nothing less decorous than wanton breezes had ever toyed with these shining little curls. His beard, which was short and bristly, was worn from "ear to ear," but growing underneath the chin left his face bare, giving him, with his weak smile, the fatuous expression of an aged sheep.

Now when Fate has an afternoon out she becomes a tricksy creature, and in such an hour she spied Mr. Pratt. Straightway there stirred within him something akin to feeling. Sensations approached him, withdrew, returned, made themselves felt. Something vitalizing stole into his veins, a subtle elixir that cut its way lightly through obstructed channels. For some time Mr. Pratt believed these to be symptoms of appendicitis, but one morning he awoke from his life-long coma, stepped into the street in front of his house and looked about him as one who for the first time sees clearly. He saw that the sky was blue, was conscious that the flowers in the square were fragrant, looked long at the dancing leaves in the hedge. When he walked down to his restaurant he no longer had the gait of a man afflicted with spring-halt.

The chicken was out of the incubator.

Half an hour later Mr. Pratt stood on a corner, sniffed the air expectantly, and recklessly breaking a thirty-years' habit, turned his back on the business quarter, hailed the driver of a North avenue milk wagon, and rode up to the finest piece of cross-section road in the county, the practice ground of the Buxton Automobile Club.

"I'll get down here," said Mr. Pratt, and he always looked back to this moment as the one in which the devil entered him.

It was a scene to stir the slowest blood. Originally a three-mile strip of ordinary wood-road, it had been widened, filled, rolled, almost sand-papered by the enthusiasts who had slept in the shadow of the loco-weed, and awoke motomaniacs. Here was all the color and spirit of the race track. Something, too, of its excitement. What lightning flashes the glancing sun struck from glistening brass and shining steel. Into what shimmer of harmony did the maroon, the blue, the golden oak, the deep green play as the vehicles slackened pace. What hints of the joys of the

road in the purr of the pneumatic tires as they moved slowly back and forth at the starting point. With what devilish pleasantry the big lamps seemed to wink at one. And that thing underneath—that Mystery of Motion, compressed, under bonds, the soul of Mechanism in leash, how one exulted in one's power over that!

Something of all this was felt by the struggling soul of Mr. Pratt. Hitherto he had classed automobiling with other devices of Satan, but now he felt a strange and unholy joy rioting in his veins. Before he knew it he had accepted an invitation to take part in an informal speed test between rival vehicles. What a life-giving, exhilarating ride that was, the wind blowing cool in his face, the blue waters of the Saco flashing into view, the clouds touching the tree-tops at the end of the road. When at the close of

Easier Than Walking Up

the speed trial, winning colors decorated the carriage in which Mr. Pratt had ridden there rose above the chorus of cheers a prolonged and blood-curdling squeal like that of an enraged bronco. It was Mr. Pratt's maiden effort at a cheer.

But let none follow too minutely the insidious undermining of a fellow mortal. The result was apparent to the most casual observer on the Buxton road. In the city it was supposed by the few who noted his absence that Mr. Pratt had joined his family at the shore, but that gentleman was living in the automobile club house at the cross-section, and had burst into a kind of hybrid bloom. He had signed the articles of faith, wore the regulation leather togs, was a perfect index to the AUTOMOBILE MAGAZINE, subscribed liberally to the sinking fund, and even tried to sing "Does Your Mother Know You Are Out?" at the instigation of

the boys. He imagined himself a master motorist, had ordered a vehicle, and was impatiently awaiting its arrival. When it finally came Mr. Pratt's joy knew no bounds. He almost came to blows with one of the members who wanted to try it. He touched it almost lovingly. "You beauty, you beauty," he said softly. He was actually jealous of it.

Among a lot of other "conveniences" for which the makers had induced Mr. Pratt to pay liberally, was a big hamper at the back, which, if he chose, he could open by merely reaching over the seat. Mr. Pratt considered this the most sportsmanlike equipment of all and refused to have it removed.

"But it is only for touring," objected one of his new friends.

"Let it stay right where it is," said Mr. Pratt, with unusual decision. "You never can tell when you may need a thing, and I want it handy."

He would almost as soon have removed a leg or an arm from one of his grandchildren. Every inch of the vehicle was precious to him. He wanted it all to himself. He felt an insane desire to wave his arms, to crow, to sing. As he had never before really wanted anything it was natural that possession should now make him a trifle childish.

After a good dinner, as the moon rose and Mr. Pratt looked upon the beauty of the white night, the idea came to him to take a run down to town, put the carriage in his stable, and in the early morning go to Old Orchard, four miles down the coast, and take a sea bath. While he made his preparations he was so fussy that the club attendants were barely allowed to assist in getting things into shape for the run.

"The old man is keyed way up in G," said one of these when Mr. Pratt finally started off.

What a ride that was! The good people along the road who went to bed early covered their heads in sudden terror as a strange, unearthly noise smote the stillness of the night; a noise comparable to nothing human, but something like one's conception of the hideous death-agony of some gigantic beast.

It was Mr. Pratt's pean of joy.

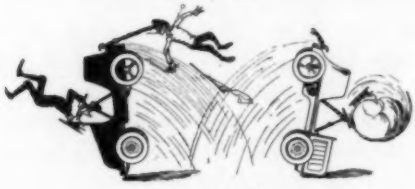
Sometimes he merely yelled "Hi! hi! hi!" Then he attempted to sing "Roll Along," but got into falsetto and lost his voice. As the bushes stirred in the light breeze he bowed and

waved a hand in return. There was a distillation of wild flowers and dew perfuming the roadside. Mr. Pratt inhaled it. He addressed it in unpoetic idiom. He saluted it with song. He met but one person and greeted him with a "yip!" that startled the man into a run. As he entered the city he quieted down, motored slowly, reached his place and put up his carriage without attracting attention.

He slept little that night, was up at five o'clock, and after eating the lunch brought from the club, ran his prize out of the stable and was about to throw over the starting lever when the

Das Schnauferls motored

tug of war and



the result therof.

thought of a bathing suit crossed his mind. Ah, truly, "Fate shapes the ends." In the ten minutes given to a vain search for that abbreviated abomination there came along the imp who lived next door, a boy with neither soul nor conscience, who took in the situation at a glance, rushed into his own home, returned with a gaudy handful of bathing attire, popped into the carriage, climbed over the seat into the hamper, and had drawn the cover down before Mr. Pratt reappeared.

The imp was well and unfavorably known to the neighborhood, among other things, for his mimicry of bird and animal

sounds. This diabolical art was his in such perfection that he had made even the minister think twice before he spoke.

Mr. Pratt went through the streets slowly. They were absolutely still, traffic beginning late in the little cities on the Saco. His hilarious mood had settled. As he went across the bridge and looked upon the reflection of the clouds in the water he said aloud, "a city of molten pearl." Something like a chuckle answered him. Startled, he looked about, but as there was no one in sight he dismissed the sound as that of some bird or animal. Everything went well, the carriage moving magically, or so at least it seemed to its infatuated owner.

Suddenly a dog appeared. There was a sound of something grinding under one wheel, then a short, sharp howl of agony which rasped Mr. Pratt's nerves like a file. Yet when he looked around there was the dog trotting unconcernedly across the street.

"Then in the name of heaven what was it that howled?" he said uneasily. He was too far off to see the little piece of wood he had run over, and of course was ignorant of the gargoyle face that was thrust over the end of the hamper at intervals of thirty seconds.

"Scat, you Pratt!"

Mr. Pratt pushed the speed lever forward so violently that the vehicle actually jumped. There was not a soul on the road.

"I'm a wicked man," said Mr. Pratt, tremulously. "Or else," he continued, "I'm losin' my mind."

He was still somewhat disturbed when he reached Old Orchard, but after a glorious ride of three miles up the beach, which was as hard and smooth as a floor, he came to a stop at some distance above the hotels and prepared for his bath. This involved nothing more complex than taking off his clothes, leaving them in the automobile, and entering the water *au naturel*. While a bathing suit might possibly have been obtained at that early hour, Mr. Pratt saw no signs of life about any of the houses, and knowing the guests would not be up for at least two hours, he decided a buff bath was safe enough.

Mr. Pratt was fond of sea bathing, which had been prescribed by his physician as necessary to his health, and a motorist must be strong! So "in he plunged boldly," splashing about near the shore at first, then feeling invigorated by the water and the exer-

cise, he swam out toward the open sea. He was enjoying a fine lazy feeling as he floated on his back, when he was interrupted by a sort of derisive hoot from the shore. He looked in that direction but no living thing was in sight.

But the automobile—it certainly was standing farther up the beach! He was sure of it. He struck out hastily and wildly for shore. The automobile moved. Mr. Pratt emitted a doleful whine. The vehicle actually gave a fiendish laugh. For one moment Mr. Pratt thought his strength was going to desert him, but he figuratively girded his loins, fairly leaped through the water, and reached the shore just as the carriage stopped. Mr. Pratt drew a long breath—but the thing started again; Mr. Pratt hurried, it stopped; then, while Mr. Pratt was still about forty feet distant, it backed a little and started away again, this time going up the beach like a thing possessed. And behold! A miracle. There at his feet lay a pair of trunks, zebra-striped, and much too small, but what would you? He struggled into their vise-like grip, drew a long breath and gave chase. He ran, he galloped, he loped, but the distance widened.

"Blast everything!" he yelled, in despair. Still he ran. At last, when Old Orchard street was reached, the vehicle turned off the beach and began the ascent of the hill, but it was surely slowing up. And now Mr. Pratt's clothes began to fly out, his trousers, his shoes, his coat, his undergarments, but he was in no condition to reason about picking them up. There was but one swimming idea in his head, to catch the runaway vehicle. He was almost near enough to touch it, but it gave a leap ahead and there issued from it a menacing howl. All the way up the hill it kept just out of Mr. Pratt's reach, a "not-good-bye-but-au-revoir" sort of defiance. Just above the corner was the Old Orchard House. Suppose he were seen! The pace was telling on him. Perspiration ran down his face and body, he was purple from exertion, and excited almost to madness by the belief that there was something diabolical about the machine. The lever worked malevolently without visible agency. Had Mr. Pratt's hair curled less tightly it would have stood on end.

They reached the corner, the vehicle seemed to waver, then with a final spurt ran up Saco road and came to a stop across the electric car track. Had Mr. Pratt, now covering ground in a

broken-winded canter, but been inspired to raise his eyes one instant sooner he would have seen a pair of stockinged legs wriggling over the back of the seat into that waterproofed pitfall at the back. As it was he reached the carriage, fell in, and sat there a moment, his breath coming in suffocating gasps. Then with some difficulty he turned and started back after his clothes, but by this time it had grown later and unhappily people were stirring. One lady on her way to early church was so overcome by the sudden projection of Mr. Pratt into her line of vision that she crossed herself hurriedly and sank in a heap on the sidewalk. Mr. Pratt alternately cursed and prayed for the next three minutes. At this juncture a hat mysteriously appeared on the seat beside him. Mr. Pratt thankfully put it on.

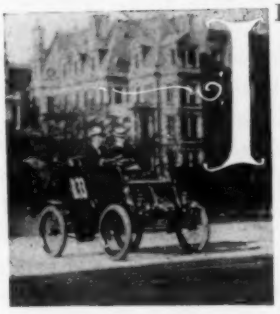
"It is better than nothing," he said, but as it was a boy's hat of the sailor style, and much too small for him, it detracted little from his high décolleté. It stuck on the back of his head, the two-inch ribbon streamers waving over his forehead like signals of distress. A man on his way to the early train, who was momentarily paralyzed by Mr. Pratt's appearance as he scorched down the street, recovered himself in such a maniacal fit of laughter that people began to collect, springing from all corners as they do at dog fights and accidents.

Meanwhile Mr. Pratt had reached the spot where part of his clothing should be. It was gone! He went on, desperately, almost dead from shame and fear and anger, and reached the B. & M. Railroad crossing just as the gates went down and the Portland train rolled into the station. The moment that followed was one of the wildest ever known in the history of Old Orchard. Then a policeman appeared with a linen duster, the automobile was run into a nearby stable, and poor Mr. Pratt, humiliated and crushed, burst into tears.

The imp's part in the affair was never known—that is, until now, but it was his father who bought that eighteen hundred dollar vehicle for nine hundred dollars—"and no questions asked."

Alcohol for Automobiles

By R. F. Collins



IF the automobile has undergone such astonishing headway the last few years it is because the new vehicle is now universally regarded as one of the greatest and most direct factors in the world's economy. As a sport and a pastime it will always, of course, grow in favor and will attract a constantly widening circle of supporters who enjoy the new sensation of being master of their own transportation while profiting from an economy of time, but were it not for economy in other directions it is doubtful whether the motor vehicle would ever have become so popular as it is at the present moment.

If the motor vehicle is to become something more than a toy and expensive plaything, it must have other advantages over the horse-drawn vehicle besides mere endurance and speed. The owner of an automobile must find that it is a good investment and see, after calculating his year's expenses, that he has got more out of the motor propelled vehicle than he previously did from his horse-drawn one, and that, moreover, it has cost him less. When this fact is recognized by the world the automobile will become universal.

Doctors and other professional men will not employ horse-drawn carriages when they can get about so much more cheaply and quickly with automobiles. The tradesman will see his profits steadily increase when he employs motor delivery which will carry his goods to their several destinations in half the time and do the work of six horses; the farmer will get rid of his prejudice against automobiles when he employs motor wagons for all the purposes of transport and sees that the power used in the wagons can be utilized in the place of motors and traction engines for driving his machinery.

But personal interest is not alone in giving such a universal character to the automobile. The motor vehicle needs fuel, and this must be obtained as cheaply as possible. On the European

Continent the importance of supplying this fuel is attracting a good deal of attention from agriculturists and the different governments. In time the demands will be so enormous that the industry which undertakes to supply the fuel will be in an extremely prosperous condition, and the question which is just now such a burning one in France, Belgium and Germany is whether the future supplies are to be provided by foreign petroleum producers or by home agriculturists.

Already many millions of dollars are spent every year upon the purchase of foreign petroleum, and if this money can be put into the pockets of native producers it will mean, they say, a permanent and marvelous revival of the agricultural industry. Besides, can the present production of gasoline possibly keep pace with the requirements of automobilism? The advocates of alcohol say that it cannot, but after all it matters little, for so long as they are favored by sufficiently high import duties they hope to force the use of alcohol on automobilists by supplying it at a lower figure than any of the petroleum products can be marketed for against a tariff.

Illustrated Trade Note

Following Out His Ideas of a Perfect Automobile

For some years past this alcohol propaganda has been carried on in France, but it was only in the fall of last year that any real attempt was made to create a general interest in the question by the tests made in Paris under the direction of the Minister of Agriculture. Until these official tests former experiments had given only doubtful results, for not only has the consumption of alcohol been higher than that of gasolene but the former caused considerable trouble by corroding the valves of the motor which had to be ground regularly every day, and if the motor were left alone for any time there was a hard deposit in the cylinder which could only be removed by a chisel.

These drawbacks have been almost entirely eliminated, and it is even claimed entirely removed, by carburetting alcohol with fifty per cent. of benzine, which at the same time greatly increases its efficiency. It is only in this form that alcohol is now used. The consumption has also been reduced in certain types of motors until now it is scarcely more than that of gasolene. In some cases even where excise duties have been suppressed on alcohol, there is already a decided advantage in alcohol's economy over gasolene. The new spirit has therefore made considerable progress, but not sufficient to warrant the hope that it can yet enter into successful competition with the petroleum product.

Some more light is to be thrown on this question by the fresh series of tests to be carried out by the French Minister of Agriculture, who is organizing a big run of alcohol vehicles through the beet root districts of the north of France. This will be followed by an international exhibition of alcohol motors and vehicles. In all the tests being held, moreover, special attention is given to alcohol, and the comparison is very interesting as showing that the spirit is getting near to the efficiency of gasolene. If permission can be obtained at all to run off the annual Paris-Bordeaux race all the competitors will have to use alcohol in their motors.

In Germany the utilization of alcohol seems to be making remarkable headway if we are to judge from the number of vehicles running there with this spirit and the alcohol shows that are being held in different parts of that country. One of the biggest of these alcohol motor exhibitions has just been held in Berlin, where the automobile firms using alcohol motors claim to have secured astonishing results in the way of economy, though nothing seems to have been done in getting accurate results by official tests. All the makers, however, confess that they are obliged to start the motors with gasolene, as alcohol will not volatilize properly unless the engine is warm.

It is impossible yet to say whether this stupendous effort to popularize alcohol for automobiles will result in the universal employment of the carburetted spirit, for everything turns upon the question of cost, and while no doubt the price will be reduced, it is clear that it must have a fairly large margin of economy if it is to take the place of gasolene.

The whole question is, indeed, an extremely open one, and unless the import duties on petroleum are heavily increased the manufacturers of gasolene would have very little difficulty in lowering their prices to compete with alcohol, though the government is said to have some remedy up its sleeve against any such contingency, notably in taking over the petroleum refineries and making them governmental establishments.

For the moment the question is interesting because it is giving to the automobile a vast importance as a factor in the industrial prosperity of the country. The motor vehicle is no longer regarded as an instrument of pleasure for the rich, but as a means of contributing enormously to the national resources, and not the least merit of the alcohol propaganda is that it has induced the European farmer to look upon the automobile as a source of profit to himself and has thus created a practical interest which will result in the growing employment of industrial vehicles.

Paris, March 15.

Newspaper Heading Illustrated

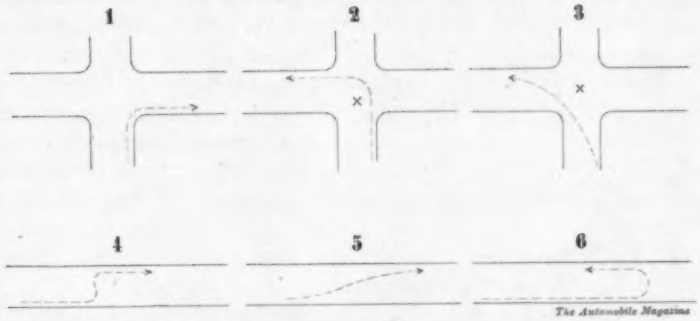
"Notes and Comments"

Making Street Traffic Safer

By William Phelps Eno

SINCE I first began writing these articles in the "Rider and Driver" I have found that every day adds to the necessity of rational management of our street traffic, the knowledge and observance of the rules of the road and their enforcement by the police, who, at the present time, do not understand them themselves or have not been instructed to properly enforce them.

The first important principle of the rules of the road is that vehicles shall keep to the right, and not only do so when passing other vehicles going in the opposite direction, but always to the right and as near the right-hand curbstone as vehicles at a stand-



still or going at a slower rate of speed will permit, thus leaving room in the middle of the street for those going in the same direction at a greater speed to pass to the left.

Second, that a vehicle turning into another street to the right should turn the corner as near the curb as practicable, and keep on to the right in the street into which it turns, as I have shown in Plan I.

Third, in turning into a street to the left, a vehicle should turn around the center of intersection of the two streets, as explained in Plan II. Unfortunately, the usual rule of proceeding is seen in Plan III.

Fourth, that a vehicle crossing from one side of the street to the other should do so when going to stop, headed in the same direction, according to Plan IV, and not as shown in Plan V. When the

vehicle intends to stop or to continue headed in the opposite direction, then Plan VI shows the safe and proper way to act.

By even a casual study of them, it will be seen by the diagrams that the interference with other vehicles by the correct method is for a much shorter space than by the incorrect method usually followed.

It is a question, however, whether an ordinance should not be passed prohibiting vehicles stopping under any circumstances at the left-hand curb. It is probable that such an ordinance is desirable and for the best good.

In slowing up, or stopping, a signal should always be given to those behind by raising the whip or hand. In turning, a signal should be given by raising the whip or hand and twirling it in the direction in which the turn is to be made. These signals are almost always wrongly given, usually through ignorance but often by those who should know better.

The other rules of the road are important and should be strictly enforced also. Attention has been called only to the most important.

The observance of these rules does not mean a hardship to anyone, but, on the contrary, makes it easier for everyone concerned, easier and safer and more expeditious for the driver, the rider, the automobilist and the pedestrian. It is safe to say that nine-tenths of the accidents in our streets come from non-observance of the rules of the road and careless driving.

The cruelty imposed upon horses by disregard of these principles and the consequent hurried and severe reining up to avoid accident is worth the attention of all.

The time has come when it is most important that a change should be made without delay. Every day increases the traffic and the importance of getting from point to point with safety and without delay.

The remedies for most of the street traffic ills are: First, that the police should understand the rules of the road, and

Second, that they should enforce them.

Every time a policeman sees a vehicle out of its proper place or turning in the wrong way he should warn the driver, and, if necessary, stop him and tell him the reason why. This alone would effect a great deal of good. In case of flagrant abuse the driver should be stopped, his name and address taken, and if he is arrested a second time he should be fined a substantial amount.

I suggest further, that the driver of every public or numbered vehicle be required to hold a numbered card issued by the police, certifying that he has applied for it and shown that he thoroughly understands the rules of the road and knows how to drive safely.

That copies of the rules of the road (which should be carefully revised, rearranged and more simply expressed, with a few explanatory diagrams), should be kept to be given away on application at the police station, and at the office of the Society for the Prevention of Cruelty to Animals.

That every livery or public stable should be required to keep posted, where it can be easily seen by the drivers, a copy of the rules of the road, with explanatory diagrams (printed on a larger form). That one of these copies should be fastened up at every public hack stand.

The right of way of vehicles on north and south streets over those on cross streets, and the bringing of the offenders to justice, are matters specially worthy of the attention of the police.

The London police perhaps manage traffic in crowded places better than anyone else, and their methods should be adopted, and, if possible, improved upon. The management of carriages at theaters, the opera and other entertainments should be carefully studied and specially trained, expert and competent police assigned to such duties.

Carriages should never be allowed to discharge or take on passengers on the left hand side, but should always proceed in the same direction as the regular traffic of the street. Careful and intelligent study and management of this subject would do much for the comfort of those who attend entertainments and for all who use the streets.

Stages should be forced to carry conductors. It is too much for one man to drive, make change and look out for passengers. Stages should be obliged to make their stops alongside the right hand sidewalk and not in the middle of the street.

The speed of cars and automobiles should be regulated by law. Automobiles have come to stay, but now is the time to restrict their speed to a safe limit.

The expense entailed in furnishing the cards and posters of the rules of the road and the examination of drivers and training of the police would be but trifling in comparison to the amount saved by the avoidance of accidents to people, horses, carriages and har-

ness, to say nothing of the greater speed and pleasure in getting about the city.

All rubber-tired vehicles should carry bells; the size, kind and manner of adjustment should be defined by law. An ordinance should be passed prohibiting the leaving of horses standing unattended in the street.

It is hoped that something will be done, and it is urged upon all to do their share. The police are responsible for most of the trouble. The magistrates before whom the offenders are brought have sometimes failed in their duty through ignorance and allowed the offenders to go free, not realizing the importance of the subject. Those few of the police who have attempted to do their duty have thus been discouraged.

I am sure that anyone who takes the trouble to investigate will decide that at least 25 per cent. would be added to the efficiency of the trucking and delivery wagon service if the rules of the road were understood by the drivers and properly enforced by the police. If only 5 per cent. were added to the efficiency, the saving would be thousands of dollars a day by an expenditure of practically nil.

The keeping of trucks off at least one avenue, between certain hours, is most desirable, but if they would keep to the right, observe the rules of the road and common decency, much of the objection on the part of light vehicle users to them would be removed.

To accomplish the desired result it is necessary first of all that the public should understand the evil and its causes and demand reform. Second, that the powers that be should have the rules of the road revised; and third, that the police should be directed to enforce them.

The articles on the subject that have so far appeared, though well intended, have been practically useless, because of lack of organized effort; but if the officers of any city government will take up the matter properly the evil can be quickly and easily remedied.

Properly understood and regulated, several times the present traffic in our streets could go on with less delay, more safety and more comfort than there is now with practically no regulation and no management. It is time something should be done.

Not So Heartless As Thought To Be

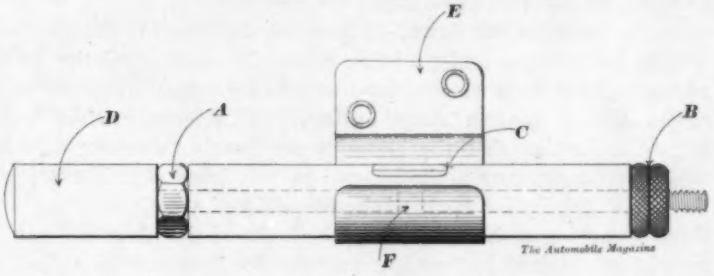
"I think that the very least a scorcher could do when he runs into anyone is to stop and see what damage is done."

"He does, if it's to the automobile."

Promises to Eliminate Many Troubles

WITH the name of "Ignicator," the little instrument here shown in its actual size is being placed on the English market with great success. Certainly if the newcomer performs only a portion of what its enthusiastic supporters have claimed for it, in a very short time an ignicator will form an essential part of the equipment of every explosive engine.

The quintette of advantages gained by the use of this little instrument are the possibility of definitely localizing without leaving one's seat: (1) exhausted batteries; (2) damage to sparking plug; (3) short circuit or leakage; (4) unsuitable carburation; (5) faulty sparker. Where more than one cylinder is used in addition to the foregoing the instrument shows instantly what each cylinder is



doing. For example, from the driver's seat it can be ascertained if the third cylinder is dead, throwing its work on the remaining ones. By employing the ignicator as a "cut out" it can be made to serve a double purpose; without leaving his seat the driver can test each cylinder of a motor of two or more cylinders separately; and he can economize power by cutting off any cylinder or cylinders that may not be required for working purposes, such as when going down hills or when a less speed is required. This is accomplished by simply turning the vulcanite handle (D) until the points of the rods (represented by the dotted lines) are too far apart for the spark to jump across. A separate indicator is required for each cylinder. The instruments are easily attached to the vehicle as follows: Having screwed the clip or clips on to the dashboard or other convenient part, where it can be easily seen by the driver, the insulated wire usually employed to convey the secondary or high tension current

from the coil to the sparking plug is connected instead from the coil to one terminal (A or B) of the ignicator; then, by means of an extra length of similar insulated wire, the other terminal of the ignicator (B or A) is attached to the sparking plug. Referring to the drawing herewith, D is the vulcanite or insulated handle for regulating the width of the spark gap or electric bridge, and it is by turning this handle sufficiently, so as to widen the gap, that "cutting out" any cylinder can be effected; A and B are the terminals connected, one to the coil, the other to the engine sparking plug; C, the observation slot through which the spark and condition thereof is observed; E, the clip in which the ignicator is held. The dotted lines represent the rod inside the tube from the points of which the spark passes, and F is the gap, or electric bridge across which the spark passes.

To ascertain where a fault, if any, lies, the following conditions have by repeated observations been summarized:

(1) Batteries run down.—The spark at the gap in the ignicator will be intermittent and probably cease altogether until the points are brought a little closer, upon which the spark will commence again. This is due to a "drop" in the E.M.F. (electro-motive force), a sure indication that the batteries are nearly "discharged," and therefore the pressure of the induced current is not sufficient to jump the gap. (2) In the event of the porcelain of a plug cracking, and thereby causing a short circuit in the body of the plug, this can at once be ascertained by "cutting out" the good cylinder or cylinders, and the one that is failing to explode (although indicating a good spark in the ignicator) is the one that is short circuiting. (3) Short circuit of leakage.—In this case there would be no spark shown in the ignicator. (4) Unsuitable carburation is shown by there being no explosion in the cylinder or cylinders although a good spark is shown in the ignicator. (5) Faulty contact in contact breaker or trembler would be indicated by a complete absence of any spark, whether the points are close together or not, or even in contact.

There are always two kind of customers in a storage place—those who want everything done their own way, and those who don't want to do anything anybody else's way.

The pains some people take to appear at ease on the seat of an automobile are as nothing compared to those they give other people.

A Terrible Doom

THERE is a sudden stir and bustle in the court room as the prisoner, the now famous and reckless owner of the deadly "Pink Paralyzer," is brought up to receive his sentence for terrifying the entire Long Island district.

During the few days which have elapsed since the jury rendered their verdict, his whole appearance has changed shockingly for the worse. The mask of indifference which he wore throughout the trial has been dropped. His sallow cheeks have assumed the color of chalk and his bloodshot eyes reflect a look of utter despair. It is evident that he fully realizes his position and is prepared for a heavy sentence.

Several women are among the spectators and they regard him with unmistakable signs of pity. For he is young and rather good-looking.

It is the general opinion of those who have watched the progress of the trial before the Nassau County jury that he will get at least ten years.

Finally the judge begins to speak, and in stern, inflexible tones points out to the trembling culprit the error of his ways, concluding with:

"And now, Samuel Scorchmore, I have carefully considered your case and am of the opinion that the demands of justice and the safety of Long Island can be adequately met only by the imposition of a heavy penalty. It is therefore the sentence of this court that you be imprisoned with hard labor until such time as the technical committee of an automobile club shall have agreed upon which is the best form of vehicle and motive power to use with safety on the public highways.

A murmur of horror from the spectators greets the judge's dreadful words. It is followed by an agonized scream from the unhappy prisoner.

"Not that," he pleads, the tears pouring down his cheeks. "For mercy's sake, not that! Better death itself than imprisonment for life!"

The pessimist is a person who does not expect to get what he wants in a motor vehicle, but expects to be disappointed in it if he should.

The Rime of the Ancient 'Mobilist

A DOGGEREL
With apologies to Dr. S. J. Coleridge

BY F. R. HUTTON

Delivered by Prof. Hutton at the Annual Dinner of the Automobile Club of America, March 7, 1902.

It was a fur-clad 'mobilist,
And he stoppeth one of three:
"By thy kid cap, and goggled eye,
Now wherefore stopp'st thou me?"

"The Waldorf's doors are opened wide
I fain would enter in:
The guests are met, the feast is set,
May'st hear the merry din!"

The victim guest beat on his breast,
But he cannot choose but hear,
And thus spake on that baleful man
In the guise of an engineer:

The shop was cleared, the curb-stone neared,
Right merrily did we drop
Below the kirk, below the hill,
Below the road-house top.

And now the storm-blast came, and he
Was tyrannous and strong,
We struck a gang of rough "white wings"
Who jeered us right along.

And now there came both mist and snow,
And it was piercing cold,
And snow hub-high we passèd by
Which Woodberry's gang had rolled.

The snow was here, the snow was there,
The snow was all around;
We bumped and growled—it creaked and howled
Like noises in a swound.

Just then loomed up a terrier pup—
Out through the fog it came;
We thought it were a vagrant cur,
And gave it a strong name.

It bit at tires it ne'er had ate,
And round and round it flew,
And barking, threw a canine fit—
Its fate was sure—I knew.

"God save thee!—ancient mobilist,
From the friends that plague like that!
Why look'st thou thus"? "With my rear-tire
I rolled that puppy flat!"

They said I had done a grews ome thing
And it would work me woe;
And all averred, what had occurred,
Would queer my luck to show.

A cycling cop was pedaling near;
I must not leave him so—
So I bundled him over at the rear,
In the depths of my tonneau.

Then, sure enough, my charge missed fire
We stuck—nor spark, nor motion,
As idle as a painted launch
Upon a painted ocean.

I swore and worked my starting crank
Till every pore did drip;
I tried my plug—my mixer, too—
That pup HAD queered my trip.

Water, water, all inside,
Till all my flannels shrink;
Water, sweating everywhere,
Nor any drop to drink.

My storage tank in utter drought
Had dried up at the root;
It could not flow, no more than if
It had been choked with soot.

Ah—well-a-day, what jeering looks
Each countenance did deck:
Instead of a cup—'twas that BLOOMING PUP
Had taken me in the neck.

Canto II

There passed a weary time. Each man
  Was cross, and glared each eye
A weary time! a weary time!
  And glared each weary eye—
When looking westward, I beheld
  A something 'gainst the sky.

At first it seemed a little speck,
  And then it seemed at mist;
It moved, and moved, and took at last
  A certain shape, I wist.

A speck, a mist, a shape, I wist,
  And still it neared and neared;
As if it dodged the snowy ruts,
  It plunged, and shied, and veered.

The western road was all aflame,
  The day was well-nigh done;
Almost upon the western verge
  Kested the broad red sun,
When that strange shape drove suddenly
  Betwixt us and the sun.

The farmer's lad alongside came
  Driving a sorry steed—
"O tow us home, in Heaven's name,
  I'll pay you what you need!"

Then in a minute, we 'gain stir
  With a short uneasy motion;
Backwards and forwards, half our length,
  With a short uneasy motion.

Then like a pawing horse let go,
  They made a sudden bound;
It flung the blood into my head,
  I seemed down in a swound.

How long in that same fit I lay,
  I have not to declare;
But ere my living life returned,
  I heard, and in my soul discerned,
  Two voices in theair:

It's he—quoth one—Is this the man,
  Who scorns the useful horse,
Like him with bow, who laid full low,
    The harmless Albatross?

The other was a softer voice,
  As soft as honey-dew.
Quoth he: "The man hath penance done,
  And penance more will do."

But soon I heard the snap of belts,
  I saw the shop appear;
My head was turned perforce away,
  I heard the foreman's jeer.

The foreman and the wiper boy,
  I heard them coming fast;
Great Cæsar's ghost—It was a joy,
  That terrier could not blast.

"O fix me fix me, worthy man,
  The foreman crossed his brow;
Say, quick," quoth he, "I bid thee say
  What manner of man art thou?"

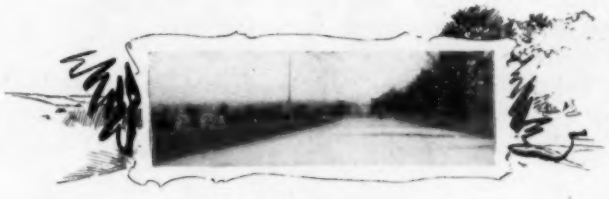
Forthwith this frame of mine was
    wrenched
  With a woful agony,
Which forced me to begin my tale;
    And then it left me free.

O 'mobile guest! this soul has been
  Alone on a long hard road;
My battery dead; no gasoline;
  Miles off from my abode.

Farewell, farewell! but this I tell
  To thee, thou dinner guest:—
He bubbleth well who loveth well,
  Man, horse and dog at least.

He bubbleth best who loveth best
  All things, both great and small;
For some fine day, you'll go in quest
  Of a farmer's horse and stall!

The guest was as he had been stunned,
  And was of sense forlorn;
A sadder and a wiser man
  He'll rise the morrow morn.



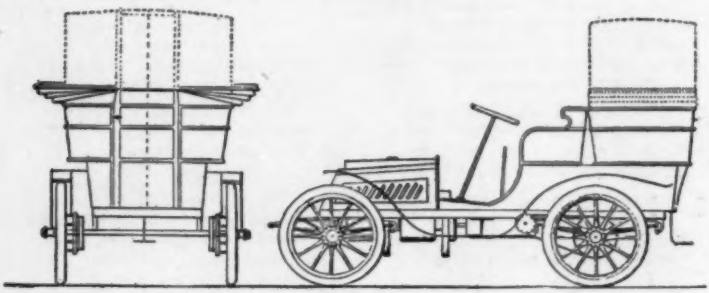
The Theory of Explosion

(From the French of Dr. Leopold Forment)

WHEN the piston has created a vacuum in the cylinder, and taken in an equivalent volume of air, the chemical constituents as represented are:

1. Azote, 78.35 per cent. 2. Oxygen, 20.77. 3. Carbonic acid, from 3 to 4 ten-thousandths. 4. Watery vapor, a small quantity. 5. Light carburetted hydrogen. 6. Ammonia. 7. Nitrous compounds. 8. Ozone. 9. Iodine. 10. Mineral dust. 11. Organic and organized bodies. 12. Many rare metals, recently discovered.

These latter bodies, however, are not constant and play only a secondary role, owing to their small quantity.



Idea for a Folding Tonneau Top

A carburetted hydrogen (petroleum, gasolene, C2 H4), introduced into the foregoing mass, heated by the compression and electric spark, explodes violently. The H seizes the O of the air with such avidity that the concussion produces an enormous rise of temperature. The water (H_2O), which was formed, is immediately volatilized, and by its expansion distributed in many atmospheres.

The C of the carburet, liberated by this reaction, has acted in the same manner with the freed O, and becomes carbonic acid, contributing to the heating and the expansion of the compound.

The two reunited have raised the general temperature to between 1,200 and 2,000 degrees, with a corresponding number of atmospheres.

Had this mass of carburet, however, been burned in the open air, or simply with a lamp wick, there would have been no explosion. The combustion would have taken place slowly and progressively,

in a totally different manner from the one above described. The hydrogen, which has a greater affinity for oxygen than the carbon, has played the part of the lion, and taken unto itself all it wished. To such an extent is this so that the carbon, isolated behind the hydrogen flame, has scarcely been able to attract any oxygen. Converted into fine dust, and maintained in a highly heated condition by the surrounding walls, it has become incandescent and luminous; but not to the extent of producing an explosion.

Therefore, combustion of the hydrogen, too slow and too limited, and an absence of chemical oxydation from the carbon; hence no explosion.

This proves that the carburet must be thoroughly mixed with pure air in order to produce explosion. This is a very difficult thing to accomplish with the ordinary carbureters. In order to fulfill the necessary conditions of motors making from 1,000 to 2,000 revolutions per minute, these parts can never convey exactly the same quantity of liquid to the cylinder. Therefore the explosions occur at varying intervals. Out of a hundred explosions there are not two which have the same dynamic tenor. Hence, there arises the almost insurmountable difficulty of assigning an invariable limitation of time to the explosions.

The union of the air and carbon rarely arrives by the law of chemical equivalents. If there is too much air they approach too near the normal limit, and should there be too much carbon, they recede too far from it.

In the latter case, the hydrogen absorbs all of the oxygen. Then there remains the carbon, which, liberated, and rendered incandescent by the intense heat developed by the preceding reaction, is enabled to combine with the azote and form cyanides. These products, recognizable by their strong offensive odors which they disseminate along the route of a passing motor, are never explosive. They represent a simple loss resulting from the chemical act of explosion.

Among these nauseating odors, *sui generis*, the particular odor of acetylene may be noticed at moments, at least it appears so, and it is not impossible that such may be the case; for, when the hydrogen is about combining with the oxygen, it may easily be the case that a fraction of this latter gas escapes in order to complete the separation from the carbon, and that the formula $C_2 H_4$ passes into the state of $C_2 H_2$. But this is a matter of little moment.

Finally, after all these changes, there remains the carburet,

which finds no elements of affinity, and evaporates purely and simply. That is to say, it is completely lost for all energizing purposes.

To avoid all these final changes which are useless, or only slightly profitable, large quantities of air must be admitted and the carbon well diluted. Thus watery vapor and carbonic acid are generated, both lending themselves excellently to the proposed end.

From the foregoing it may very properly be concluded that motors propelled by explosion differ but slightly from those doing the same thing by steam, since, like the latter, steam is the active agent; but the carbonic acid is far removed from steam in the act of propulsion.

This explains why cylinders, in spite of no lubrication, or almost none, as frequently happens with all motors, operate without deterioration. Like the steam, so-called, they contain within themselves the corrective. This vapor is a cushion which oils the surfaces, and even isolates them.

Inventors of lubricating apparatus for use on cylinders might, therefore, better cease from their labors, rather than continue what is really a useless search. Writers, too, should abstain from their threadbare assertion that the one thing necessary for perfecting motors is to discover an oil which will not vaporize at 400 degrees. In giving this counsel to inventors—a class already equipped by temperament for seeking the moon—they abuse their vocations as writers.

The Drop That Undid Him

"What's the matter with Jumspark? He looks as if he had been in a fight!"

"He was, indulged in a drop too much."

"You don't say! Why, I never knew he drank."

"It wasn't drink. He dropped a remark about a motor belonging to a bigger man which the bigger one didn't like.

Better Than One In Five

IT has been said by the detractors of the Serpollet flash boiler that it was not a success because it did not permit of any reserve force, and was for that reason likely to come to grief when called upon for a supreme effort, as in the mounting of a steep grade. Perhaps the accompanying illustration may go somewhat toward removing this manifestly erroneous idea. The vehicle, a Gardener-Serpollet, of six horse-power is shown ascending a grade of 22 per cent.

at a speed of twenty miles per hour. For a six horse-power vehicle of any kind weighing 2,000 pounds and carrying four passengers to accomplish any such performance as this speaks well for its construction and its motive power no matter what they are, and certainly does away with all question as to the Serpollet system being one which will or can supply sufficient power for automobile use.

Defined Up To Date

"Papa, what's a pessimist?"

"A pessimist is a man who can't enjoy a ride to-day because he is afraid the roads will be muddy to-morrow."

Assembling an Automobile

By William J. Grubb

AS an introductory we will review a little modern history. The automobile began to attract the attention of the public and the manufacturer about the time the bicycle began to lose the same. Of course, automobiles had wheels, therefore many of the bicycle manufacturers concluded that turning out motors on wheels was right in their line, and straight away they started in to build them. The starting was as far as many of them got, and it is not difficult to find the reason for their lack of further progress.

There is quite a considerable difference between building and marketing an article which retails for $40 and one that commands $1,000. For the bicycle makers to take hold of a new business like this at a time when their finances were already crippled simply meant for them to go from bad to nothing. I once asked one of these converts from bicycles to automobiles, who had built a steam carriage, what it cost him. He said, "About $2,000, and I guess our business." I do not wish it to be understood that I believe the bicycle manufacturers are the only ones who have made a failure of the automobile business. I rather think the reverse is the rule, because I know that some of the parties who rushed into this new and rather fascinating business did not even know how to build bicycles, very much less automobiles. After spending several years in experimenting, and thousands of dollars in cash, some of these may by this time be realizing their early dreams, if they have not been wakened up by the sheriff in the meantime.

Some very interesting history could be written about the might-have-beens you are sure to find about every automobile factory. I have seen many of them, in fact, I could add to the collection. It is very interesting to see how differently people feel about these deferred hopes. Some are proud of their failures, and take pleasure in giving you their history, while others are ashamed of them and hide them away. In fact, I have seen some that you could hardly blame anyone for being ashamed of, and some that are actually on the market, which it would have been better if their makers had have hidden them.

After studying the business thoroughly from every reasonable point, I doubt whether there is a chance for the assembler to make

any money out of the automobile. My advice to the person with several thousand dollars, and an inclination to go into the assembling of automobiles, is to keep his thousands and give his inclination to somebody else who has no money to lose, and allow him to start a stock company.

But if you have money to spare, and with it are of a mechanical turn of mind, and would like to get some experience for which you do not object to paying the price, there is a wide field in automobilism which has not been entirely worked out. Many of America's best and brightest ideas have been developed by the small manufacturer, or mechanic, for the very good reason that among these there are more men with brains than with wealth. I would be the last person, therefore, to discourage the very thing that has caused other nations to dub us "Yankees."

Extract from an Automobile Advertisement Illustrated

"We Are Making a Big Hit With Our New Model"

My experience has, however, convinced me that if you do attempt to assemble, the most profitable plan is to buy only the very best parts, such as have been, by their designers and builders, intended for the use you intend putting them to. Do not buy a marine engine, put it into a carriage, and then blame the manufacturer if it is not satisfactory. You might just as well try to hatch a chicken from a duck's egg.

In these remarks I will deal only with the explosive moto-driven vehicle. In starting out to assemble such a conveyance the first and most important thing is to select an engine. In doing this, remembering that you are substituting a motor for a horse, and in doing so you are dealing with quite as uncertain a quantity. Consider power, speed and imperfections just as carefully as though you were looking over a horse. After you have made the round of the gas engine people, you will probably consider picking out a horse as the easiest thing in the world. Remember, that it is the

business of the engine people to sell to you, but it should be yours to buy only what you want. Do not let any engine builder make you believe that when you have a two horse power engine you have the mechanical equivalent of a double team. Make yourself thoroughly acquainted with the method of testing the brake horse power of engines, and if the manufacturer of the engine you have selected will not send it to you to test, go to his factory and see it tested there. Be sure that the testing outfit and conditions are as near as possible to what will have to be met in the carriage. Accept no such excuses for failure to develop alleged horse power, as that any engine will run better after having been in use for several months. While this may be true to a certain extent, still if the manufacturers' work has been properly done there is nothing in the assertion, while, to offset this, very likely the party testing the engine for you may know better how to handle it than you will even in six months' time.

I have often thought that if some enterprising gas engine maker, who was thoroughly honest in the rating of his engines, was to get up a card with his advertisement on one side, and the simple methods of testing brake horse power, with diagram of how to do so outlined on the other side, he would promptly secure the confidence of every possible purchaser of a motor.

As to what the number of cylinders should be, whether horizontal, vertical or opposed type, I could take up all this entire space in telling you what I have learned about these different types, while there could be volumes written on what I do not know about the very same things. To make it brief as possible I will simply say that whatever type, if it develops the horse power, is best suited to the kind of frame and transmission you favor, should prove satisfactory.

Concerning ignition, I believe that half of the troubles of the gas engine can be traced to this point. Each different method has its champions, likewise its detractors. For a high speed engine I believe that the jump spark is the best, although many are getting good results from slow speed engines using this same method. Jump sparking has the advantage of being easily advanced or retarded, thereby permitting of the gas in the cylinders being ignited at such time as to give the best results in speed and power. If the assembler uses this method and employs a vibrator in connection with it, he must be very careful to have the wires from the

vibrator to the plugs perfectly insulated. A good plan to secure this is to encase them in rubber tubing. If anyone does not think this necessary, conversion can be quickly brought about by taking hold of these wires. This will be the shortest and most convincing argument you ever experienced.

As to batteries, there are some very good dry ones that will give good service, and have a fair efficiency for quite an amount of hard use if one is only careful not to allow them to get short circuited. Dry batteries have the advantage of being light and convenient to store in the carriage. Keep them out of the damp and test occasionally, since one weak cell will spoil the circuit.

The dynamo is being very sucessfully used by some of the best manufacturers, and when properly installed has the advantage of small expense as compared with its efficiency. A good plan is to buy your engine complete with carburetter, batteries, spark-coil plugs and muffler, unless you have had some previous experience with these different parts.

The transmission and reverse need careful consideration, and I would advise testing up in much the same manner as you would test the engine, but in this case giving recognition to the power lost instead of developed. I have known as much as three horse power to lose itself in trying to work its way through some of these contrivances. To me it seems as though the Panhard system was one of the best we have at the present time. I do not know of anyone selling this particular gear to the trade, although some of the best manufacturers are using it in their vehicles. There are some very good speed gears on the market. Such as are well protected from the dust and mud, and are either run in an oil bath, or have good and sufficient means of oiling.

Do not neglect radiation. Give yourself plenty of surface,

and put it where it can relieve itself of the heat radiated. If you do your experimenting in the winter, you are very apt to find you lack surface for running in the hot weather of July and August.

In buying or building your gear, see to it that it is sufficiently strong to bear the weight you intend to carry in and out of the ruts that you will encounter on all sorts of roads. Remember, always, that you are carrying your horse under your carriage, and that you are pushing the conveyance instead of pulling it around the corners, in and out of ruts and ditches.

There will continue to be considerable argument as to whether chain or bevel gears is the better method of transmitting power to the rear wheels. Each has its advantages and disadvantages, but I prefer the chain if properly protected from mud and grit, although I have secured excellent results from employing bevels.

In assembling it is well to first select your engine and transmission, and then adopt such running gear as will accommodate itself best to these parts. If you intend building your running gear yourself, I would advise using ball bearings of liberal size, rather than plain bearings, since ball bearings will more readily adapt themselves to any imperfections in alignment than plain bearings will, while not so quickly making inroads on your power, since you will soon learn that it is only the power which eventually reaches the rear wheels that counts.

After you have your carriage complete, it is very important that you test it out and find just what power you have at the driving point. You can determine this efficiency without taking the vehicle on the roads, and, perhaps, there making a show of it to non-sympathizing onlookers.

Hoping you may be successful in your first attempt at assembling, or, if you are not so, that you will have the courage and patience to persevere, and by doing this win out, I have, as a fellow-assembler, written the foregoing for your aid and comfort.

Deadly Rivals

"You're a liar!"

"You're a bigger one!"

The sound evidently came from below stairs. An automobile was kept there and the trouble might have been expected.

The odometer had been quietly taking note of the goings-on. The gas meter only knew from hearsay.

Stopping an Automobile

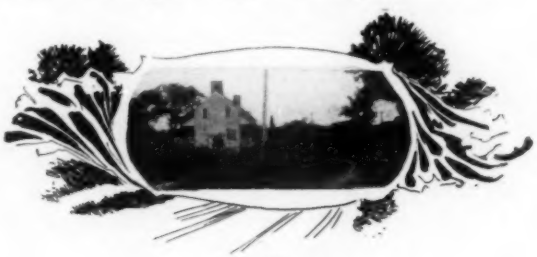
THANKS to the very careful public tests of the Automobile Club of Great Britain and Ireland it is now possible to determine just what control of stopping an automobile the driver of it really has. The vehicles were sent over a full mile of level roadway and timed for the full distance and again for the last one-twentieth (88 yards) so that the officials might have the exact speed at which the vehicles were traveling the instant the brakes were applied. As the front wheels crossed the tape at the finish of the mile, brakes were put on, and when the vehicle had finally come to a complete standstill, the distance from the tape to where the front wheels rested was carefully measured.

Using 11 feet 8 inches as a "length" it was shown that on a level, fairly dry road a motor vehicle could be stopped at varying speeds as follows:

From 11 to 14 miles per hour in 1⅛ times the car's length.
From 15 to 17 miles per hour in twice the car's length.
From 18 to 20 miles per hour in 2¾ times the car's length.
From 20 to 24 miles per hour in 3½ times the car's length.

The figures given above are, of course, only averages. As a matter of fact one vehicle traveling at 13 miles per hour was stopped in 4 yards; another traveling at 18¾ miles an hour was stopped in 7 yards, and another when going at 20 miles an hour was stopped in 12¾ yards.

The average weight of the vehicles, without passengers, was 1 ton 4 cwt. From these results it will be seen that automobiles can, on an average, be stopped when traveling at 20 miles an hour in less distance than the ordinary horse-drawn vehicle could be stopped when traveling at only 10 miles per hour.



The Duty of the Hour

(From the French of Léon Auscher)

OUR duty to all, and our most immediate interest, should be to create a reaction against the terror which our powerful machines have inspired in the minds of those who are, as yet, outside the automobile fraternity.

It is useless to attempt to persuade the public that we are justified in traveling so swiftly, because we are sure of our ability to stop suddenly, at will. The public will only be convinced by seeing us proceed quietly and reasonably. And in this it is right.

Put the question to yourself: Are you so absolutely sure of your brakes? And what if they should not act as you expect them? It has already happened more than once.

Then, when the accident occurs, you blame the brake or a broken chain, or any old thing—but yourself; never your imprudence, your carelessness. Yet, if, at the moment of the accident there are witnesses to declare you guilty of excessive speed, will it do any good to deny it? And people will always have the right to say that if you had shown better judgment, by traveling more slowly, the accident would not have occurred, or, at least, would have been less serious.

Now is the time, more than ever, to lessen the general pace, and endeavor to inspire confidence by your manner of traveling, which may be sufficiently rapid, if dignified and calm. Reassure people by your skilful manipulation and caution. In traversing villages, prove to the inhabitants, by stopping or slowing down constantly, that you are not trying to emulate an express train on the highway, but merely a wise tourist desirous of traveling in comfort. Reserve your speeding until you are on long, unfrequented highways. And, even on these roads, when, after a long run without obstacles, you perceive a carriage looming up on the horizon, be prudent, for your own sake as well as theirs. If it happens to be going the same way as yourself, warn it of your approach, in time; pass it gently and noiselessly, for the shying of the horse might result disastrously to you as well as to its owner. If the vehicle is approaching you in an opposite direction, keep

your eye on the horse, and if it pricks up its ears or prances, send your mechanician to hold the bridle while you pass.

Above all, do not unnecessarily go against the wishes of the fuming ruralite. Remember that he, his fathers and his grandfathers have been, for many ages, the undisturbed kings of the highways, while we are the intruders, the newcomers, who prevent him from going and coming to market in half-drowsing, dreaming state as he has heretofore done, depending on his trusty nag to guide him along the well-known route.

You may well say that you have equal rights to his, and that you are taxed as much, or more, than he, therefore the road is as much yours as his. But, in the first place, old customs are not best overthrown by the brutal exercise of a conceded right; and secondly, what would you say if the countryman suddenly took to galloping through the streets at a steeplechase gait, whip in hand, and only avoiding collision and accidents by the most skilful maneuvering instead of slowing his pace? "What a madman!" you would be likely to exclaim. And why should he not say the same of you?

I know many who agree with me in this respect; but by some strange phenomenon, as soon as these good people touch a speed lever, they are not content till they have brought it to the highest notch.

A chauffeur's pride seems to increase proportionately with his speed. When he has guests with him in his vehicle he becomes conscienceless. In order to impress them with his power, he executes such hazardous evolutions as would make him shudder if he were witness of his own feats, and stopped to think of the number of beings for whom he is responsible and the uncertain tenure of these lives while he is holding his way in this perilous fashion.

Yet this same terrible chauffeur has, at some period of his existence, cursed the imprudence of others who proceeded with much less temerity. But that was because he had not yet been inoculated with the same poison. And when, on some fine day, borne on the tide of fashion, he suddenly conceives the idea of overcoming space and time, like the rest of the world, and rushes off to Charron, or some other manufacturer, to purchase a 12 H. P.—Oh! he doesn't intend to "scorch"—certainly not: he is

only going peacefully a-touring. And if he has bought a "12" H.P. rather than a "6," it is not for speed, but only for hill climbing. Also, if he has ordered an aluminum body, it is not to lessen the weight, but rather that it "takes the paint better." And his reason for not wishing a hood is not because he wishes to be exposed to the rain, sun and dust, and most certainly not because the covering detracts from speed! Oh, no! again. It's only because he dislikes to be encumbered with useless paraphernalia.

So, while they are preparing his carriage, he goes about informing himself as to which is the pneumatic tire with least friction and the most advanced system of ignition, and concerning every apparatus for furthering increase of speed! . . . . but he has no intention of ever racing.

He scarcely sleeps nights for thinking how he can best augment possibilities for an ultimatum of speed.

And when his bill is presented—what joy—since that signifies the carriage is ready to be delivered. He responds promptly, check in hand. He is paying; has paid; knows how to guide his machine, and is an expert mechanician.

From this moment on he is identical with HER. This peaceful citizen who would never have sat astride a horse without at least fifty lessons—this good provincial and timid land-owner becomes the most intolerable, the most authoritative of mechanical connoisseurs. Eight days ago he didn't know one part from another. Now he contemptuously shrugs his shoulders when someone mentions "feu Lavassor."

I am not describing one individual, but depicting a general monomania, the type specific, which has arisen in an almost inexplicable fashion. I admit it originates in the fever of innovation and enthusiasm. But the whole cause of automobiling suffers thereby, and progress is retarded by the unwise ones, to the undoing of the many who have good judgment.

Calling the Turn

It's in the spring, when Nature is
  A thousand new charms revealing,
That the young man's rotary mind
  Lightly turns to thoughts of automobiling.

Defying All Precept

PUTTING the cart before the horse is something strongly advised against by ancient saws and wise ones generally. Yet here the thing is, and despite all advice to the contrary it is a success. Apparently the horse is engaged in pushing the carriage, whereas in reality there is a gasolene motor hidden away under the dilapidated seat of the vehicle that is the power which causes the whole affair to progress. All the horse does is to occupy his foolish, useless position in the rear and submit, as best he may, to the smell of unconsumed gasolene. The steering wheel is nothing but an ex-buggy one with the felloe ripped off. As a

practical joke and as a sensation creator the vehicle is an unqualified success as it proceeds along the streets of Baltimore, where it belongs.

Why He Wondered

The deaf man stood in the center of a good Long Island road.

"Look out; there's a scorcher coming!" shouted the resident who knew what he was shouting about.

"What?" said the deaf man."

"There's a scorcher coming."

"What?"

The big racing vehicle landed him a hundred feet away in the middle of a turnip patch, and as he picked himself up and dug the soil from out his mouth and eyes, the deaf one said:

"I wonder what that fool kept me there talking about."

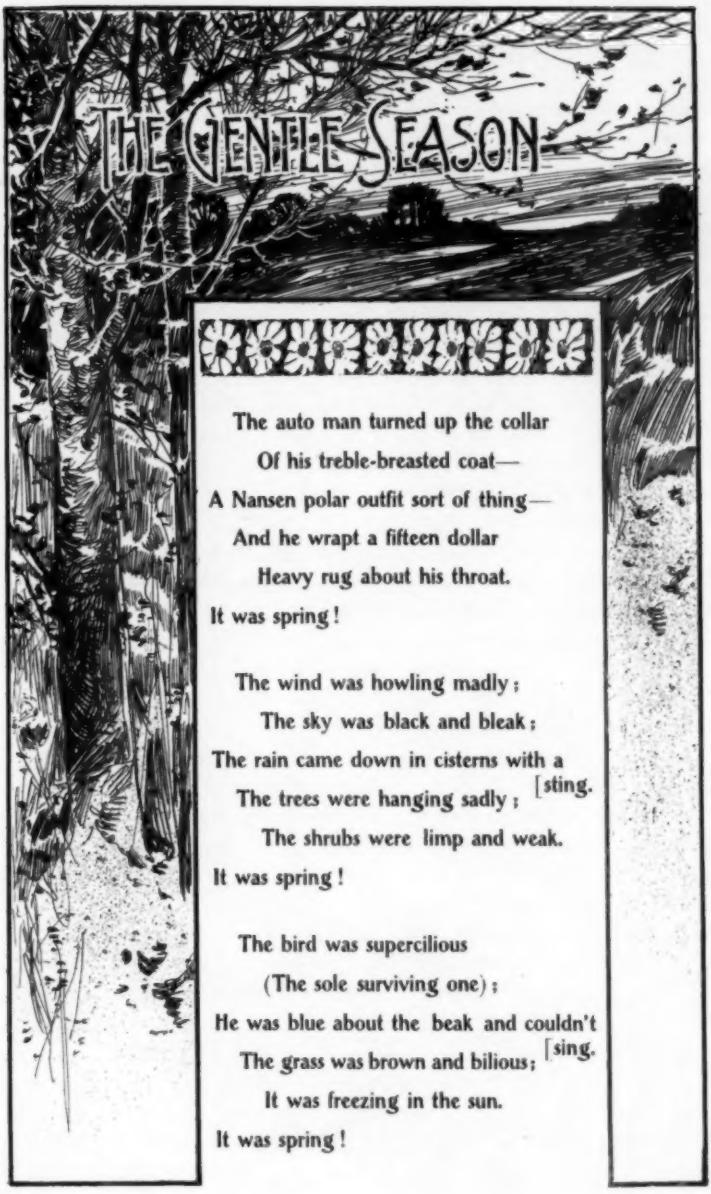
For Steel Instead of Stone

IN his address before the Automobile Club of America on the advantages of the steel road system, General Roy Stone said that one drawback to road improvement, as it is generally understood, that is macadamizing, is that it is a crude and unsatisfactory improvement at best; it shows no advance in method in the past 2,000 years; and when compared with the high development of railroads, it decredits the ingenuity of a progressive age, and the talent that has been applied to the subject. From a logical standpoint, General Stone contended, there is no more sense in running a wagon over stones than in doing the same with a locomotive. But railroads are a private concern and have had the advantage of a private interest and private initiative, while roads are a public concern and a public neglect. The same means of "smoothing the way" is available to both, but for roads it has scarcely been considered.

In his advocacy of metal tracks for wagons, a substitute for and improvement on stone roads, General Stone said that the experiments made had all tended to simplify the construction of these roads, and especially their foundations, to the last degree. It is found needless to tie the rails together or to use cross ties or other supporting devices. The rail is a simple channel with flaring sides turned down into a narrow bed of gravel, broken stones or vitrified clay, which is drained at every low point; the rails are strongly spliced by a channel piece, closely fitting underneath the joint; the whole forming practically a continuous plate on a uniform bearing, the space between the rails is covered with a light coat of gravel; on the outside the earth is simply rolled. A single track will serve for most country roads; the turning out is easy, and the earth road never being used, is not cut up and never muddy except when frost is coming out.

Aside from its many other advantages this system of road building offered, General Stone said, it particularly appealed to the owners of motor vehicles, since upon the steel road an automobile could be driven 300 miles with the same amount of power that was required to propel it but 50 miles upon a macadamized road.

A great many people who will never own a motor vehicle have wasted a lot of time thinking about what might happen if they did.



The auto man turned up the collar
Of his treble-breasted coat—
A Nansen polar outfit sort of thing—
And he wrapt a fifteen dollar
Heavy rug about his throat.
It was spring!

The wind was howling madly;
The sky was black and bleak;
The rain came down in cisterns with a sting.
The trees were hanging sadly;
The shrubs were limp and weak.
It was spring!

The bird was supercilious
(The sole surviving one);
He was blue about the beak and couldn't sing.
The grass was brown and bilious;
It was freezing in the sun.
It was spring!

An Important Discovery

"SOME time ago," says M. Paul Meyan in *La France Automobile*, "I announced, in language sufficiently cautious that I might not be accused of divulging professional secrets, yet at the same time plain enough to be understood, that the means of eliminating the burned gases of a petroleum motor (while they are enclosed) had been discovered. In other words, a way had been found for the motor, without recourse outside, to provide itself with the air necessary for the continuation of its revolutions.

"The discoverer is Mr. George F. Jaubert, doctor of sciences, and ex-professor of preparatory course for the Polytechnic school, and it all came about through his study of the act of respiration for the purpose of finding some way to facilitate the task of sub-marine divers, by furnishing them with artificial air in place of that usually conveyed to them by a pump.

"To produce this artificial air, Dr. Jaubert originated a chemical body, which is scientifically entitled 'oxylith,' or, commonly speaking, 'oxygen stone.' In form the new product resembles the calcium carbide which is used for making acetylene gas, only it has the advantage of having no overproduction. When water is poured on a bit of oxylith, pure oxygen is immediately generated. It is easy to be seen, therefore, that by combining this operation with other chemical reactions, the problem of producing artificial air is at once solved.

"In the course of his laboratory experiments, made in 1898, it was proved by Dr. Jaubert that a human being could breathe the some air which had passed through the lungs, and had consequently become vitiated, for many hours in succession without inconvenience. For, and this is a curious phenomenon, this oxylith which furnishes the necessary oxygen to the lungs, mathematically eliminates in return, the carbonic acid thrown off in breathing.

"From the demands of the man to those of the motor was but a step, in application. Substitute the cylinder for the lungs, and valves that correspond to the respiratory tubes, and you have practically the same material to work with or on. This is just what Dr. Jaubert has done, with the result that the consumption of fuel is reduced about 30 per cent., that is to say, from 650 liters per horse power, under the old system, to 420 for the same time under Dr. Jaubert's methods. The consequence is that the unit measure is reduced about one-third,

a yield equal to, or even greater than that claimed for the Diesel cycle.

"Thanks to the presence of pure oxygen, by which economy of consumption is attained and power added. We may now hope to obtain better results from motors without having to enlarge their cylinders. In fact, if the experiments the Doctor has made are borne out in service tests, it is safe to predict that oxylith will soon become one of the indispensable co-efficients for a properly working motor, which will use it as a stimulus for steep grades and poor roads."

For Prince Henry's Brother

THE Kaiser's new motor-carriage is a splendid four-cylindered sixteen horse-power Mercèdes carriage geared to four speeds, ranging from three to forty miles an hour, one lever altering the pace and reversing the direction of the carriage.

It is fitted with two acetylene lamps, and has three powerful brakes—two foot and one hand—and can be brought to a stand-still while descending the steepest hills.

There is a central pumping arrangement, which lubricates the entire vehicle. A plate-glass front protects the passengers from the wind. The carriage holds four persons, and is finished in white enamel, with narrow gold stripes.

In traveling along the Highway of Success, it is an excellent plan to keep to the right.

Some men could learn all about a motor if they did not think they already knew it.

The Lament of Pegasus

In vain from the barn sounds my piteous neighing,
  In vain do I stamp with my fire-shod hoofs,
On the sides of my stall are my wings sadly fraying,
  Oh! I long to be off over hilltops and roofs.

I had hoped that E. Markham might do his spring plowing,
  While I plodded patiently, row after row,
In harness ahead of him, thereby allowing
  A rest to the overworked man with the hoe.

But Markham's forgotten, alas! all about me,
  He's become a commercial, acquisitive bard,
And he reels off his sonnets and ballads without me,
  And closes them out at five dollars a yard.

I believed that Al Austin could never refuse me
  A chance to tell Krüger Britannia must rule.
But Austin, it seems, is unable to use me,
  And the job is let out to the government mule.

And then there was Kipling, who often would mount me,
  And ride over ships, love, and armies, rough shod,
So boldly that men soon began to account me
  The spirit incarnate of some Hindoo god.

But by and by Kipling began to get tired,
  And now I shall have no more gallops with him;
He's got past the age when a man is inspired,
  And is giving his time to a heathen called Kim.

All chance to get out for a run is denied me;
  Just think how a haltered-up Pegasus feels.
Though other fair poets there are who could ride me,
  They'd rather take chances with automobiles.

J. J. MONTAGUE.

An Antiquated Simile

"They hissed a lecturer at the automobile club the other night."

"Was he prosy?"

"No; but he actually forgot himself so far as to say that civilization was making strides."

We Are Willing to Concede It

A Boston girl who has been trying to find out why her automobile often runs into objects she tries to avoid thinks she has solved the problem at last. She says: "It is hypnotic influence

Vice-President and General Manager E. B. Gallaher, Fournier-Searchmont Company, in his latest creation, a 12 horse power tonneau.

of concentrated attention, rendering the movements incoordinate, so that the driver becomes the victim of perverted reflexes of purposeless effort and the abject subject of an optical delusion." And perhaps she is right.

Some Sparking Troubles I've Had

By Reginald Wales

WHILE negotiating an exceptionally rough stretch of road, I was continually annoyed and subjected to much bodily discomfiture because the vehicle no longer proceeded steadily but developed a peculiar jerky motion as though the motor were missing explosions more frequently than was conducive to either its comfort or mine. This condition was but new, for although the road over which I was traveling was extremely uneven owing to recent rains, yet up to this the vehicle had proceeded over it all with comparative ease. The last mile or so, however, saw the very decided change to which I have alluded. Things went from bad to worse until the motion became absolutely unbearable, and something had to be done toward correcting it. I could find nothing at all the matter except a loose binding-post and this I tightened with much care. There was nothing more possible to do, so I started my engine, pulled in the clutch and moved off—leaving behind me all trouble, the motor running as smoothly as could be imagined.

Being overcome with a desire to take only a short run without any unnecessary bother, I disregarded the warning of my batteries that they were not in condition for further service. All went well for perhaps eight or ten miles when, as I rather expected, upon recalling the remembrance of the series life to be almost spent, irregular explosions began, growing constantly worse for the next mile or two, until I found myself nicely sidetracked beneath a shady tree and meditating upon the evils attending recklessness and the dissatisfaction skulking always at the heels of neglect. My battery gauge indisputably showed the series to be now almost exhausted; there was still a little generation of current going on but this was quite insufficient to supply ignition requirements. This instrument told me the trouble was right here, that I need look no further, and I didn't, unquestionably abiding by the advice which I knew to be true. My penance was to be ignominiously hauled into the nearest town by a farm horse whose battery and horse-power were all that the task demanded of him.

It is obvious that the sparking points influence the motor, as is illustrated by the following: A fellow townsman had purchased

a vehicle some eight months ago and in the interim had given it almost constant usage. The sparking points during all this time were not removed for examination or cleaning purposes. On his way home one day his attention was directed to the irregularity of the motors and, upon searching for external causes, found no apparent reason for the trouble. He was, therefore, forced to struggle along as best he could which he did for another five miles, then the matter was taken entirely out of his hands by the machine suddenly and absolutely refusing to proceed. There was no other recourse left him, since he was seemingly powerless—although he afterward learned to the contrary, but to enlist the aid of several convenient mules and tow his own mulish vehicle home. This he did with as much grace and dignity as could be expected. An expert on gasoline engines was summoned who, after inquiring into the nature of the case, removed the points and found them thickly coated with a blackish incrustation. (I would venture the opinion that this substance was probably produced by the action of the explosion and it formed an effectual insulation between the two points, thus preventing their developing a flash.) This accumulation was removed by the aid of a file, the points reinstalled and the motor again placed in a satisfactory running condition. The owner of this carriage knew nothing of the points other than that they were there; neither had he any idea as to the liability of their becoming incrusted. Another example of being introduced to an automobile drawback for which through culpable ignorance you are not acquainted.

Going along just as nice as could be one day I had my progress stayed by something I could not account for. Again the battery gauge was pressed into service (the reader will soon begin to realize the value of this little instrument) and individual tests made of each of the cells composing the series. One of these proved to be worthless through depreciation. It was a matter of but a few moments to bridge over this and get into motion again.

In this, the last spark of my present batch of battery troubles, my trip was brought to a decisive termination, as in the previous cases I have cited, by the irregularity of the motor, which did not seem to develop its usual speed or strength. The failure of latter was particularly noticeable, naturally, when it came to climbing grades. In fact it was only possible to detect some defect when

taking inclines requiring every particle of power that could be crowded on, or by strict observance to its speeding qualities on the level. Strange to say, I was able to start the motor again without doing much of anything, for at that time I could see little or nothing to do. I continued on my way homeward, but before I had safely reached there the engine was forgetting to take ignitions, spluttering and fuming and otherwise acting very badly. The next day I set about investigating the cause of all this and found the wires and binding posts at the sparking plug were covered with a surprisingly thick coating of oil and dust. This acted as a partial non-conductor, influencing in a measure, the ignition. A leaking lubricating cup was responsible for the whole trouble.

The manufacturer who never changes his mind regarding the vehicle he builds is the one who has so little mind that he can't run any risks with it.

Evasion

"Ain't I just a little bow legged?"

'Bow legged? The idea! Why, it was only yesterday, sir, I was telling the head cutter that your lower limbs, sir, were absolutely without a parallel; and he agreed with me, too."

When Troubles Fly

Would you forget that life means care,
That weary time brings silver hair,
That every one has grief to bear?
  Then grasp the wheel.

When 'neath the morning's glowing sky,
Before the sun has mounted high,
You, like the swallows, dart and fly,
  How glad you feel!

Your friends' short-comings, leniently
You'll view, and all their goodness see,
You'll half forgive your enemy
  When you hold the wheel.

During the Controversy

"I should think you'd have some horse sense."
"What do you mean by horse sense?"
"Sense enough to use an automobile instead of a horse!"

Automobile Club of America's Banquet

THE theme of "Better Roads" pervaded all the speeches at the third annual dinner of the Automobile Club of America, which was held at the Waldorf-Astoria on March 7. A better subject for post-prandial oratory or a better handling of it, no one could have asked for.

At the guest table with President Shattuck sat Signor G. Marconi, President Jacob A. Cantor of the Borough of Manhattan, Prof. Elihu Thompson, M. Ernest Cuenod de Martigner, Vice-President of the Automobile Club de Suisse; Col. John Jacob Astor, Gen. George Moore Smith, J. P. Allds, Republican leader of the State Legislature; Edward A. Bond, Engineer and Surveyor of the State of New York; Col. W. H. Moore, President of the National Good Roads Association; Martin Dodge, Director of the Public Road Inquiry Federal Bureau; Prof. F. R. Hutton, of Columbia University, Secretary of the Society of American Engineers; John P. Haines, President of the Society for the Prevention of Cruelty to Animals, and W. Pierrepont White, of Utica, Chairman of the Standing Committee in the Interest of Road Improvement in New York State.

In his introduction of the speakers President Shattuck was at his best, and in his opening remarks, when he took occasion to put the Automobile Club of America, upon record in this fashion, he was greeted with a round of applause: "We are ashamed that it has been necessary for the Legislature of this State to pass stringent laws to prevent the abuse of the highways by the owners of automobiles. This club believes that all roads belong to citizens in common, and that the owner of an automobile has no more right upon them than anyone else, and indeed that the nurse pushing a baby carriage has far more right than he. We do not defend for a moment the driver of an automobile who drives his machine furiously, taking the middle of the road and blowing his horn, as an intimation to the rest of the world that it get into the ditch or be killed if it stay in the road. There are a few, a very few, such people, and they should be driven from the highways; but the club has not altogether agreed with some gentlemen from Nassau County in this State, who desire to make it a crime, punishable by a long term in prison, if a low rate of speed is exceeded by the owner of an automobile. Fortunately we believe we have persuaded the Legislature at Albany to enact a

reasonable law which will prevent excessive speed and the inconsiderate use of the highways."

President of the Borough Cantor made an address in a semi-humorous vein, in which he said that he had already told Mr. Allds, the Republican leader in the Legislature, that unless the State got $1,500,000 for good roads this year, Republican victory would be far away in the fall. "In the Borough of Manhattan," he said, "I want good roads and good signs. (Applause.) It's a combination that can't be beaten unless the Controller beats it. (Laughter.) I want to convince him that Manhattan is not the outskirts of Brooklyn, and that we don't want at our street corners signs like those which at a country road crossings tell those passing to look out for the locomotive."

The Chairman then introduced Signor Marconi, who was asked to say a few words extemporaneously. The inventor explained that he did not know that he was to be called upon for a speech and acknowledged that he was one of the poorest of after-dinner speakers.

"I own two automobiles," he said, "a motor car and a motor cycle. I bought them because I thought I might apply wireless telegraphy. On my motor car I have a wireless telegraphing mechanism, and already have been able to carry on communication with my base at a distance of thirty miles. I think wireless telegraphy would be very useful on an automobile in case of a breakdown, when you might be able to telegraph to your wives that you would be late for dinner. (Laughter.)

"I had a breakdown, and it was on the occasion of my being chased by the English policemen. In that case I was able to communicate with my friends and arrange with them to bail me out when I was captured. (Laughter.) But, of course, the wireless telegraph as applied to automobiles, is intended for military service, and we hope yet to be able to keep up communication for distances much greater than thirty miles."

The inventor was followed by M. Martinger, of the Automobile Club of Switzerland; W. Pierrepont White spoke on "Good Roads and the Farmer;" Prof. Thompson on "The Mechanical Development of the Automobile;" Col. Moore on "Roads, Organization, and Results;" Prof. Hutton discussed "The Future of the Automobile," while Mr. Dodge spoke on "The Federal Government and Good Roads."

Why My Bill Was Introduced

SENATOR WILLIAM W. COCKS

IT must be admitted that the subject of regulating the speed of automobiles has claimed the attention of a large number of the people of this State during the past few months. It was with the hope of correcting the evil of reckless driving on our highways, that I introduced my bill regulating the speed to fifteen miles an hour in the country, and eight miles in cities and villages. Let me say on the start, that we who are asking for this legislation recognize the fact that the automobile is here to stay, and is a vehicle that will be of immense value to the people, and we will endeavor to adjust ourselves to the circumstances attending the use of them on our highways as soon as possible, but we do most earnestly protest against the excessive speed of many of these vehicles.

The majority of the drivers of automobiles are careful and courteous to those whose horses may be frightened by their machines, and take the precaution to slacken their speed; they also take the same precaution at dangerous points in our highways. The object of my bill, primarily, is to restrain the minority of these drivers, who are not prone to regard the interest and welfare of others on the highways.

This matter is brought more forcibly to the attention of the people of my district than in any other district in the State, owing to the fact that we have a great many miles of macadamized roads, upon which there is very little grade, which make ideal places for the speeding of automobiles.

The Automobile Club of America, has stated by its president, that its members were opposed to the reckless driving of automobiles, yet I believe it was largely due to their influence that my bill has been so amended as to provide no adequate protection to the small villages, as under the present bill a speed of twenty miles an hour is allowed outside of cities and incorporated villages. This point

to me was a very important one, but I was unable to convince a majority of the Senate that I was correct.

The effect of the use of these high-powered machines upon our highways has been almost the total exclusion therefrom of vehicles driven by women, as well as of many timid and elderly people, who are even now afraid to venture upon the roads, even though a man be driving. This to many people may seem a very small matter, but persons who are familiar with the conditions prevailing in a country district know that it is a very great privation for those who are unable to keep a coachman to be prevented from driving themselves as has been their custom in the past. Some of our people go so far as to regret the fact that we have such good roads, because of the numerous automobiles that frequent our vicinity.

Just how successful we may be in enforcing the provisions of this bill if it should become a law remains to be seen, but I firmly believe that something must be done to correct this evil. It must be borne in mind that the people using our highways have not yet become accustomed to the passage thereon of a vehicle going at the rate of thirty or forty miles an hour, which is a daily occurrence on the highways of Nassau County, and as yet they are unable to properly appreciate the rapidity with which these vehicles are traveling. They are accustomed to judging the speed of an express train, but when we have a vehicle on an ordinary highway, running at that rate of speed it is an innovation, and in the estimation of many of our residents a menace to the safety of the people traveling on our roads.

The number of accidents caused by the reckless driving of automobiles would probably fill the entire space of this issue of your magazine, and it would not be worth while here to recite any of them, as they are a daily occurrence and are familiar to your readers. I could relate happenings in my immediate neighborhood where the drivers of these mchines have been audacious to an extreme, and in many instances exceedingly cowardly, for after causing the wreck they have left for parts unknown as soon as possible.

Some of the papers have assumed that this movement for legislation to restrict the speed of automobiles has been asked for by farmers alone, and that they were prompted by jealousy, etc. This is far from being the fact, as I have had the hearty support of many wealthy summer residents of my district, as well as a large number of business men living in villages, who are quite as much interested in this matter as any of the farmers.

American Motor League

BORN of the enthusiasm begotten of America's first taste of motor vehicle racing, the first national organization of automobilists in this country was, on October 29, 1895, christened the American Motor League. Since then the progress of the organization has been slow, but sure, until recently when the need of an association of and for the individual owners of automobiles became so pressing as to send the League's membership forward with a rush.

E. F. Brown, President

When, on March 6, President Duryea called the meeting to order in the rooms of the Chicago Automobile Club, half a hundred members were present, and their enthusiasm plainly betokened the new life in the organization and foreshadowed a much more strenuous life for it henceforth.

To meet the widened scope and needs of the present, the constitution and by-laws of the League were taken up, section by section, and such changes made therein as were necessary. When the meeting had completed its labors, the results were a practically new constitution and a thoroughly up-to-date set of by-laws to accompany it.

C. E. Duryea, First Vice-President

That the officers who were to carry on the good work should be men of experience and energy, was recognized as being of the utmost importance, so from the list of eligibles proposed, a most careful selection

was made with the result that the final balloting showed the following as elected:

President, Edwin F. Brown, Chicago, Ill.; first vice-president, Charles E. Duryea, Reading, Pa.; second vice-president, W. F. Murray, Detroit; third vice-president, S. W. Merrihew, New York; treasurer, Frederick B. Hills, Boston, and secretary, F. A. Egan, New York.

W. G. Murray, Second Vice-President

Coming of the Acetylene Motor

IN a recent paper read before the German Acetylene Verein, at Eisenach, Germany, Dr. N. Caro, of Berlin, made public some entirely new discoveries regarding the use of acetylene. When passed through gasolene acetylene gas becomes as heavily carburetted as does ordinary atmosphere, resulting in a superiority as a heat giver over ordinary acetylene gas of about 6 to 4. Should the newly enriched acetylene gas eventually turn out to be practical for explosive engine use it would result in the construction of motors of great power per unit of weight. Naturally this cannot be accomplished without some thought, since acetylene gas alone has not yielded to the inventors entirely in this direction and when enriched with gasolene vapor the two may show a decided inclination to separate when cooled. While this may add to the difficulty of employing the new power producer it is not a problem incapable of solution.

F. B. Hills, Treasurer

American Automobile Association

ON Monday, March 2, in the temporary club headquarters of the Chicago Automobile Club, there assembled representatives of the leading automobile clubs of this country for the purpose of organizing a federation which, according to its constitution, has for its objects

"The promotion of a national organization of clubs composed in whole or in part of persons owning self-propelled pleasure vehicles for personal use. To co-operate in securing formation of rational legislation and the and regulating the use of proper rules in city and tions governing to protect the automobiles owners or country, and forms of self- interests of pleasure vehicles users of all and wherever propelled and privileges cles whenever The encouragement and development in this country of the automobile. To promote and encourage in all ways the construction and maintenance of good roads and improvement of existing highways and generally to maintain a national organization devoted to automobilism."

W. E. Scarritt, President

The gentlemen who so ably succeeded in their efforts to found the new organization and the clubs they represented were these:

New Jersey Automobile Club, of Newark: W. J. Stewart and W. F. Harris.

Long Island Automobile Club, of Brooklyn: F. G. Webb and Edwin Melvin.

Chicago Automobile Club: F. C. Donald and Edward F. Brown and F. X. Mudd, alternate.

Automobile Club of America, of New York; A. C. Bostwick and W. E. Scarritt.

Automobile Club of Philadelphia: Frank C. Lewin.
Grand Rapids Automobile Club: John C. Byrne and Charles B. Judd and Walter Austin, alternate.

F. C. Donald, First Vice-President

Automobile Club of Rhode Island, of Providence: Commodore W. F. Titcomb and H. H. Rice.

Automobile Club of Utica: Frederick G. Mott.

President Donald of the home club called the meeting to order, and when it had responded was duly elected chairman, with Walter L. Githens, of the Chicago Club, acting as secretary.

The first question upon which the delegates differed was the important one of franchise rights. Philadelphia moved that each active and each associate member of a club have a vote, while the Long Island Club, through Mr. Webb, fought for the restriction of the voting privilege to vehicle owners only, and temporarily this idea was upheld by the meeting, but in the end Philadelphia's proposition prevailed, the right of voting being given to owners and non-owners of vehicles, to active, associate and honory club members alike.

W. W. Grant, Second Vice President

This franchise matter once disposed of it was smooth sailing, until the question of individual membership was reached; then once more discussion was animated and opinions differed. As before, Mr. Webb was in opposition, and once more he was defeated. Evidently there was considerable strength behind the

opinion of Mr. Webb that the man who did not, maybe could not, belong to automobile club, for example, where there was no club for him to join, should not, therefore, be left alone to fight the battle of the automobile against prejudice and oppression. Eventually the delegates, however, decided that the best interests of all concerned demanded that the new organization be a league of clubs, rather than one composed of both clubs and individuals, and so it finally became.

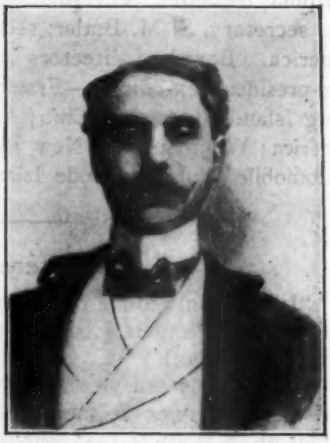
H. G. Morris, Third Vice-President

After the following committees had been announced, the meeting adjourned until the next day:

Plan and Scope.—Mr. Bostwick, of New York, chairman; Mr. Stewart, of New Jersey; Mr. Mott, of Utica; Mr. Titcomb, of Rhode Island; and Mr. Mudd, of Chicago.

Constitution and By-Laws.—Mr. Webb, of Long Island, chairman; Mr. Scarritt, of New York; Mr. Austin, of Grand Rapids; Mr. Brown, of Chicago; and Mr. Lewin, of Philadelphia.

Upon reassembling next day the committees were not slow in showing that they had done their work in a most thorough fashion. The outcome of this thoroughness was that the details of organization were rapidly passed upon. The corner-stone of the American Automobile Association was declared to be the automobile clubs of America. To become a member of the former the individual



Jefferson Seligman, Treasurer

must first become a member of some club which was itself a member. Each club will pay $10 as an initiation fee to the A. A. A., and upon election to membership will annually pay to the A. A. A. $3 for each active, associate and life member upon its membership roll, which payment will result in each of the three above-named classes of members being entitled to an equal franchise privilege in the A. A. A.

Annual meetings are to take place alternately in the East and in the West. The affairs of the organization are virtually centered in its Board of Directors, which consists of the president, first vice-president and treasurer, ex-officio, plus seven members at large. This board will meet monthly. Much to the surprise of those not in the confidence of the organizers, no allusion of any kind was made as to what stand the A. A. A. will take regarding racing and the control thereof.

When the Nominating Committee made its report, the ticket submitted was elected without a dissenting voice. The gentlemen who will control and guide the American Automobile Association for the first year of its existence in consequence are:

President, Winthrop E. Scarritt, Automobile Club of America; first vice-president, F. C. Donald, Chicago Automobile Club; second vice-president, W. W. Grant, Long Island Automobile Club; third vice-president, H. G. Morris, Automobile Club of Philadelphia; treasurer, Jefferson Seligman, Automobile Club of America; secretary, S. M. Butler, secretary of the Automobile Club of America. Board of directors (in addition to the president, first vice-president, ex-officio)—Frank G. Webb and A. R. Pardington, Long Island Automobile Club; A. R. Shattuck, Automobile Club of America; W. J. Stewart, New Jersey Automobile Club; Dr. Chase, Automobile Club of Rhode Island.

Determination

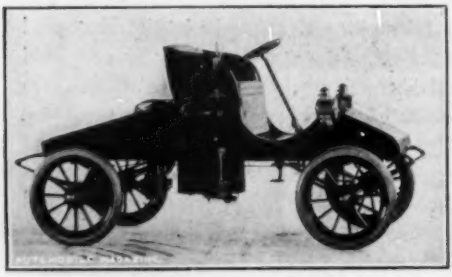
"It's the only toime on earth," said Mr. Dennis Dobbins, who was trying to impart locomotion to a balky horse, "that I wisht for an alty mobeel."

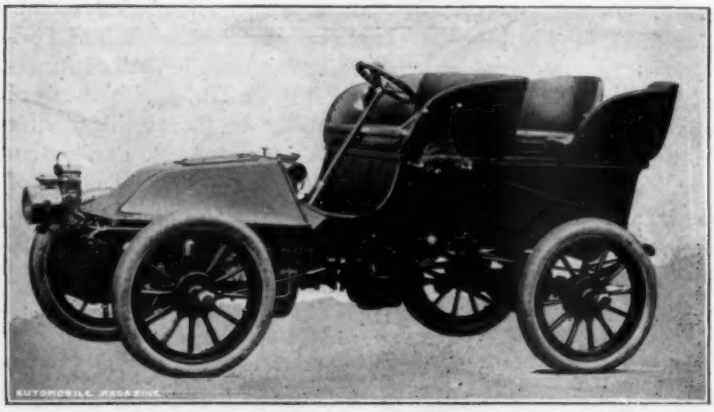
"Would yez sell yer horse?"

"Certainly not. I'd never give in like that. But I'd hitch this animal up in front of that machine, an' then I'd see whether he'd go or not."

Two Taking Touring Cars

PERHAPS no more sensational innovation in motor vehicle designing has taken place this year than in the radical departure from accepted lines, made by the International Motor Car Co.'s new steam vehicle here shown. Recognizing the popularity of the French type, the International Company abandoned the runabout shape entirely, and in its place have produced a steam carriage which is as pleasing as it is novel in appearance. Seven feet of wheel base insures comfort, while a water and gasolene supply sufficient for one hundred miles of road work, makes of the new touring car a very attractive proposition. Not less attractive is the International's new gasolene touring car, weighing 2,000 pounds, and driven by a 3 cylinder vertical explosive motor, equipped with 3 forward speeds and a reverse. Transmission is by a planetary system with a flexible shaft driving the rear axle





through encased bevel gears. So popular has this vehicle, with its 200 miles of touring radius, proven that every one of them now going through the factory has already been sold, and orders are already being booked for the second and larger batch, which will be at once got under way.

The Lesson of the Show

By S. Wallis Merrihew

PERHAPS the best judgment to pronounce on the automobile show at Chicago which came to an end on March 8 is to say that it fittingly typified the art and industry at this time. Caution might suggest the addition of the words "in the West," but this is too great a qualification. The error, if error there be, is less in the first statement.

It would not be easy to imagine a greater change than a year made in the two Chicago shows. The first was disappointly inadequate, falling short of utter failure by a very narrow margin. It is possible that even there the parallel holds, and that western automobilism of that day was also very callow and immature.

At any rate, a great, a wonderful, improvement took place in the year which elapsed. The strides that the industry made in that period were matched by a similar advance in its western show function. Whatever doubt may have existed then regarding the permanence and extent of the motor vehicle movement has by this time vanished. There is nothing illusory, nothing evanescent, in an industry which could make such a showing as met the eye at Chicago.

The exhibits were fittingly housed. The Coliseum, which was built to contain Libby Prison, the celebrated edifice having been transported, brick by brick, from the banks of the James to the shores of Lake Michigan, is spacious and of dignified architectural design. Exteriorly it falls much behind Madison Square Garden. But its interior does not suffer by comparison. Indeed, there is considerable similarity in the two structures. The chief difference is found in the absence of the series of galleries which mark the New York building, the Coliseum having but one adjunct of the sort.

Spacious as was the building, it was fairly well filled. A few vacant spaces were to be seen, but they did not number a half dozen all told, and, as if to make up for this, a few of the exhibitors were somewhat cramped for room.

Despite the act that the absentees included a number of very well known makers, principally in the East, and that no foreign vehicles were shown, the exhibition was a representative one.

Every type of vehicle now on the American market was there. Every maker who felt that he had something that appealed with force to the public of the great Middle West made his bid for recognition and favor. Consequently there were new vehicles in plenty and some modifications of old ones. Only a little over three months had elapsed since the holding of the New York show, but in that time much work had been done and many changes made.

The improvement of the motor vehicle, its advance toward approximate perfection, is the task which makers have set themselves to perform, and users are almost equally interested in seeing it realized. Consequently, the first question to be asked is, has material progress in this direction been made?

As far as the show under consideration is concerned, no better reply can be made than is contained in the comments of two visitors to Chicago, one a tradesman, the other an automobilist entirely free from trade alliances. Starting from the same point, and bringing to their task equally keen observation, they arrived at conclusions diametrically opposed.

"The show is more interesting than that at New York," said the amateur. "There is more that is really new, more that is an advancement, than there was any reason to expect. I turn from an examination of the most novel vehicles firm in the belief that we are on the right track."

"It is useless to conceal the fact that the showing is a distinctly disappointing one," was the summing up of the tradesman. "There are many new vehicles, but few novelties in construction, little of the real improvements that I looked for. The progress, although it is there, is slower than I supposed it would be."

Two things stood out from the ruck, one of them with the distinctness of a mountain peak set in a great plain.

The first was the signs—for it was only an indication—of forthcoming changes in the design of steam vehicles. Its mate—the prominence referred to—was the wonderful growth of the popular priced gasolene runabout, so called.

Taking up the latter first, it may be fittingly likened to a prairie fire. It is of, for and by the West. The effete East may view it with indifference, turn to it the cold shoulder; it makes no difference to the sturdy westerner. The movement has his approval, and in his thoroughly characteristic way he has passed it

on as a good thing; and it has gathered force as it progressed until now nothing can stop it.

There is nothing surprising in all this. The Middle West partakes of its pleasures sparingly, mingling them frequently with business. The horse and buggy is its sign manual. What the bow and arrow or the tomahawk was to the aborigines of this continent, the musket to its first white settlers, the horse and

buggy is to the denizens—urban as well as suburban—of the Middle West. It is the means of transportation between town and country, village and city.

Therefore, the popular automobile, the vehicle of the masses, could be nothing but a horseless and a shaftless buggy.

Price foreordained this; the fitness of things re-enforced and clinched the matter. Both a disinclination and an inability to pay fancy prices existed. Yet progress demanded that the newest development of the day should have attention, that such an improvement as the automobile was admitted to be should not have turned to it the cold shoulder.

Out of this feeling grew the desire for a horseless buggy, to be sold at a price that the West deemed reasonable. As whenever a sufficiently strong demand for a thing exists, some one arises to supply it, so the Olds vehicle was designed, assumed form and almost immediately acquired wide popularity.

Until this came the West, outside of a few of the larger cities, regarded the automobile with a languid interest. With it, and its followers of the same type, came the awakening. That awakening, or its extent, became apparent only at the show under notice. There were exhibited for the first time well nigh a dozen vehicles of the type referred to. Then the country dealers and users poured forth to examine, to criticise and to buy. The design did not matter so much as did the price, although, for the matter of that, there was no very great variation in either.

As regards the latter, the extreme figures were $500 and $800. Nothing under the former was offered, scarcely anything over the latter could get a hearing. Rightly or wrongly, there existed a strong feeling that no maker was justified in asking a greater price than the one mentioned.

It need scarcely be said that the popular vehicle is one using a gasolene engine for its propelling mechanism. Its size, weight and price would, across the water, cause it to come under the head of a voiturette; but, again it is almost unnecessary to add, it is radically different from the voiturette. Its lines and design are purely—even aggressively—American. The engine has a single cylinder, is placed horizontally in the rear of the vehicle—usually under the seat. The simplest form of transmission is used—chain to a live rear axle, with differential. Two speeds forward and reverse are alone provided.

The vehicle itself is in keeping with this simple motor equipment. Wire wheels and tubular running gear, a buggy-like body carrying two passengers, long leaf springs running longitudinally—these are the distinguishing features. Sometimes, although rarely, elliptical springs are fitted, and a few other minor changes made, but they are not of a nature to require any transference of the vehicle to another class.

Such is the automobile which was clearly the popular type at the Chicago show. Its sales are certain to be limited only by the ability of its makers to produce it. And the production will be

enormous. Such a vehicle lends itself readily to rapid building, and it is doubtful whether even the steam vehicle manufacturers will be able to produce with greater facility.

Genuine novelty in the gasolene type of automobiles, however, was reserved for two vehicles also shown at Chicago for the first time.

The first was the Friedman vehicle, in which a friction drive or transmission is employed. A small friction wheel is forced against the face of the engine fly wheel, and the power thus obtained is communicated to the rear axle by means of chains and sprocket wheels. This method is not entirely new, being a mod-

A String of Darracqs.

ification of transmission devices employed abroad; and it is not, of course, to be condemned without trial. Only successful use, however, can remove the doubts one instinctively entertains regarding its efficiency under the stress of all around road riding.

The second vehicle embodies a radical departure in the design of gas engines. It is fitted with what is termed the Caloric or hot air engine. The claim is made that the heat which in explosive engines is gotten rid of by means of water jacketing and other devices, is here retained and utilized to the fullest possible extent, being really converted into power. The heat is applied to the bottom of the cylinders; air is then taken in and compressed in

the cool upper end of the cylinders and transferred to the heated end, where it expands and forces the piston outward. The hot air is then expelled from the heated end at the same time another cold charge is taken in. In operation, the vehicle handled well and did much to bear out the claims made for it.

The other forms of gasolene automobiles are too well known to require extended mention. The showing was a complete one, the range of vehicles being the widest possible. Notable was the new three cylinder car of the International Motor Car Co., which was striking in design and finish, the new Fournier-Searchmonts, and the big Packard surrey.

The trend in the direction of the foreign type of vehicle was not as marked as it was at the New York show. This is true even if allowance be made for the unusual number of popular priced vehicles already touched on at length.

Yet the movement is certain to be carried to its logical conclusion unless the user steps in and interposes a veto. In a nutshell it is the conflict of the carriage and the road locomotive. The latter is the newer, as well as the more costly and fascinating, and at present it is decidedly the more talked about. But it remains to be seen whether this popularity is of the transient or the enduring kind. The public, in common with the trade, is unable to speak as a unit. A large portion of both is engaged in the task of coming to a decision; the pros and cons are being weighed, and in due course the verdict will be rendered, without the pro-carriage and the pro-locomotive advocates having much to say in the matter.

Returning to the consideration of the other epoch-marking feature of the show, the evidence—or should it be called merely a hint?—of forthcoming changes in steam vehicles.

Save in the matter of an increase in weight and size, steam vehicle designs have remained almost stationary since their introduction. They were then and ever since emphatically horseless carriages. The rising tide which has swept such a large proportion of the gasolene manufacturers over to an endorsement of the foreign model, has, until very recently, left the steam vehicles almost untouched. Carriages they were at the beginning, and carriages they appeared destined to remain until the end of the chapter.

So it looked at the New York show. In the brief interval

much took place. If credence be given to the stories afloat, and they be added to what is really known, there is plenty of change coming.

At Chicago, however, the impending movement had but three vehicles as heralds. They were those of the International, Foster and Milwaukee concerns, and in that order they should be ranked, as regards departures from accepted standards, the last named being the most distinctly foreign appearing of all. By this is meant that they suggest the bonneted vehicle, gasolene by preference and as a rule, but seemingly not destined to continue to mark that

Taken While a White was Waiting.

type exclusively. Such design is a departure from the conventional carriage form; and as there is in some quarters a very decided tendency to get away from this form, its popularity grows apace.

It is the vehicle design almost solely that steam automobile builders seek new fields. The engine, boiler, etc., are left untouched. They appear to be subjected to no innovating attacks, but, on the contrary, to have established quite beyond cavil their right to exist practically unchanged.

Users have long ceased to look for startling innovations in electric vehicle designs.

Here, even more than is the case with the steam class, carriage ideas prevail. Some changes are necessary when the horse is displaced by a battery and a motor, but they fall far short of those called for when steam or gasolene engines are coupled with road vehicles. And the electric vehicle, largely by reason of its field being more circumscribed than is that of its sister vehicles, has always been produced in a larger variety of patterns.

Consequently detailed changes merely were seen in this section. They were in the direction of an increased radius, in many cases of slightly greater speed, more economical transmission of power and greater battery efficiency. Not a few new vehicle designs made their appearance also, notwithstanding the fact that in this respect they have always led.

These and other observations will come to the experienced automobilist who critically examines the vehicles at such a show as that held at Chicago. Of attention—commanding departures from accepted standards there was little—almost nothing. He who expected or looked for such was doomed to disappointment. The art has reached too advanced a stage to warrant one to look for anything of the kind. Toward the goal which users and makers alike so ardently desire to reach, the progress must necessarily be slow. The day for advancement by leaps and bounds has gone by.

If, on the other hand, the user looks for a widening range of choice—prices, different standards of excellence, variety of design, all these being had in mind—he will not be disappointed. On every hand he will find what he wants embodied in the different types.

Reliability remains the chief desideratum. Not even speed, highly as it is valued, takes precedence over the former.

To this end improvements in details are constantly going on. Where a year ago ground for complaint existed, the causes have been removed as far as can be done in advance of the riding season. New ones will, of course, arise under the stress and strain of severe usage. But unless all signs fail, they will be fewer in number and of a less serious nature.

Notwithstanding considerable progress has been made in the direction of uniformity of design—the difference between the New

York and the Chicago shows even being noticeable, no user need look in vain for any particular departure from standards as far as they may be said to be established. Both in vehicle and engine design he may obtain what he wants if he looks closely for it. There is scarcely a disputed point—engine position, number of cylinders, transmission, ignition, steering, wheels, reaches—that the doctors do not disagree upon. The result is that the purchaser has it in his power to select almost at will.

Some Chicago Show Observations

By W. J. Morgan

A THICK set, bearded, broad-shouldered man visited the Chicago show when it was but half over. His face seemed familiar to an Automobile Magazine representative who finally recognized in him the great French manufacturer, M. Clement, President of the Panhard-Lavassor Company, of Paris. M. Clement seemed to be doing the show incog., and his two friends were equally mysterious and reticent. The writer last saw Mr. Clement at Malden, Mass., where he and I sat on a wagon together at the finish of the 1896 Linscott Bicycle Road race. This particular Frenchman is one of the greatest in a mechanical way that France has produced, and he was the pioneer maker of bicycles there, the Clement being the first "modern" bicycle, which is a son of the old velocipede and father of the still more modern ordinary bicycle which in turn was a sort of step-father to the present safety. I rode a Clement twenty-three years ago in England, only deserting it when the English manufacturer had run away from the French builder in the way of improvement.

History repeats itself, and once again the Frenchman is leading and it cannot be denied that both the English and American manufacturer has the French model in view when drawing his designs of his automobile. In some cases the Chicago Show looked very Frenchified, and the Frenchmen smiled when they saw American efforts in that direction. Mr. Clement said he was glad to see the Americans copy a good thing, and they would be given ample opportunity to copy some more before the French maker had completed his improvements. One of Mr. Clement's

companions bluntly stated that the American builder was about five years behind the French one, and there was much to be learned by the Yankee before he would make an automobile that would pass muster in France.

The various forms of power in a motive way seen at the show interested many people, and each form had its advocates. Steam held its own very nicely, and much of the revival of steam carriage interest can be traced to the White Sewing Machine Co.'s very satisfactory vehicle. Some of the older companies should feel thankful for this since it cannot be denied that many boilers have been more or less faulty and things of dissatisfaction to the unfortunate possessors of steam carriages. Under the guidance of the White success there seems to be an improvement all along the line in the way of boilers, all of which gives promise of a lengthened life for the use of steam as a vehicle power.

There was a decided improvement in the display of electric carriages. The electric power machine is certainly coming to the front and the improved battery is responsible for its doing so. The improvement in charging facilities has also much to do with this since when the owner of an electric carriage can have his own individual charging plant or when he will be able to take power from the street by slipping a coin into a convenient slot machine, then will the high noon of the electric automobile arrive.

Nothing much need be said of gasolene except that the explosive engine was there in force and various forms. Simplicity in construction seems to be the very wise endeavor of the manufacturer of gasolene engines. Absence of odor and elimination of noise are two much to be desired improvements which Yankee ingenuity is gradually giving to the explosive engine.

Some of the women who affect motoring are passing fair and some others are past.

The difference between pride and vanity in motoring is that we have one and the other fellows have the other.

The poetry of automobilic motion is synonymous with the motion of automobilic poetry when the editor tosses it into the waste basket.

THE AUTOMOBILE MAGAZINE

A Live Journal for all interested in Motor Vehicles

VOL. IV. NO. 4 NEW YORK, APRIL, 1902 PRICE 25 CENTS

Published Monthly by
THE AUTOMOBILE PRESS,
174 BROADWAY, CORNER MAIDEN LANE, NEW YORK.
Telephone: 984 Cortlandt. Cable Address: "Loceng," N. Y.
ANGUS SINCLAIR, President and Editor. FRED H. COLVIN, Vice-Prest. and Gen'l Mgr.
JAS. R. PATERSON, Secretary. W. J. MORGAN, Special Representative.

BOSTON OFFICE, 170 Summer Street. PHILADELPHIA, The Bourse.

British Representative, Alexander F. Sinclair, 7 Walmer Terrace, Ibrox, Glasgow.

Subscription Price, $3.00 a year to any Country in the Postal Union. Advertising Rates on application.

Entered at New York Post Office as second-class matter.

For Sale by Newsdealers everywhere.

The "Chauffeur" Problem

HOUSEWIVES have their troubles with the house servant question and automobilists are finding out that it isn't the easiest thing in the world to find a chauffeur who just fills the bill. Time was, and not so many months ago either, when any man who could speak French and start a motor three times out of five was hired on the spot and thought to be a jewel of the first water. But experience has taught us through the medium of bursted water jackets resulting from neglect to drain on a cold night, and other equally memorable examples, that further requisites are necessary to complete satisfaction and that the desired combination is difficult to obtain.

We want a man who is familiar with the mechanism of the car in question, who can coax it to mote when for some unaccountable reason it balks under our own care. He must also be ingenious enough to devise little repairs on the road, should they

become necessary, and must keep the entire vehicle in good repair, preparing for breakdowns caused by wear and otherwise. These are the features which require a mechanic who is a skilled workman.

The other requirements are cleansing the machine and driving it, both of which are functions of a coachman and few skilled mechanics are content to play coachman. Their skilled training and the independence of their position in the labor world gives them good cause to resent the imputation of being a servant in the usually accepted sense.

If motors never went wrong on the road the solution would be easy, for a good coachman can learn to handle a machine as much as necessary and the mechanical end could receive attention at home or in a repair station. But the mechanic is most needed on the road in case of an emergency, the owner usually prefers to drive and the coachman is most needed at home to wash the vehicle after it comes in.

So the whole question is somewhat complicated and with no visible solution unless we can make skilled mechanics of our coachmen or induce the mechanics to forget their skill until it is needed, when for the time being they can be monarchs of all they survey.

The Money Value of Good Roads

THE annual report of the Maryland Geological Survey announces that the people of that state have expended over $6,000,000 in the last ten years on their common roads; most of the money has been wasted in continual repairing. Many of the roads have no natural drainage. They are bad roads a part or all the time.

The Survey has made a careful estimate showing that it costs the people of Maryland $3,000,000 a year more to do their hauling over poor highways than it would cost if they were turned into first-rate roads.

This estimate supplements the information collected by the Department of Agriculture when it received data from over twelve hundred counties from all over the country and found that the average cost of hauling a ton load one mile was 25 cents, while the average cost in six European countries that possess improved highways was almost exactly one-third as much.

More than one factor enters into the cost of hauling, but the main reason why American farmers pay three times as much per mile as European farmers pay is that the Americans can haul, on an average, only one ton over poor dirt roads, while the European farmer hauls from three to four tons at a load over fine highways.

In doing what he can to overcome these archaic conditions in his country, the American automobilist, even if he is actuated solely by a selfish motive, which we do not believe he is, is still doing a work which is second to none where the question of public welfare, comfort and prosperity are under consideration. Reformers are never popular, particularly with the very people their reforms would most benefit, and the American automobilist is no exception. The rural anti-progressive views with profound distrust any effort to benefit him through any alteration of his characteristic lack of energy and ability, hence he loves not the automobile or its natural product—the advocate for improved highways. Unfortunate as this condition is, it was not unexpected and will not prevent, though it will delay, the arrival of the day when the man who has occasion to use an American road will have an American road fit for him to use.

Why scorch? If you use an automobile, do it soberly, quietly, happily.—Boston Record.

Who does scorch? Hasn't scorching become a lost art or nearly so? Where scorching exists, except in some hardened cases, the presumption is, the general good character of the automobilist being established, that he means to be sober, quiet, and happy. But the devil sometimes enters into motors. They are but too capable of demoniac possession. When an automobile goes wild, then look out for trouble, although all the bicycle policemen surround you. The good man with the bad motor can work more woe than the bad man with the good motor. There are motors of a temper as pleasant as that of a cooing dove. Anarchist motors irreclaimable desparadoes. They usually get into the hands of sober, quiet, and happy persons who don't know how to manage them.

To make the present type of motor vehicle a more comfortable conveyance in bad weather should be the effort of the manufacturers. It is not overstating the necessity for doing this to say that there is more need for a good bad weather automobile than there is for a

good pleasant weather one. When the weather and the road conditions make the use of the horse impossible or inadvisable, then the motor vehicle should shine by comparison. Many would use a practical automobile of this kind to save their horses, who could not in the first instance ever be induced to purchase any but a horse-drawn vehicle. It would not be at all necessary to entirely reconstruct the present type of bodies if, as a beginning, the now almost universal low dashboard was built with the same rake as the steering pillar, curved and brought well back and over the steering wheel. Carrying this to a sufficient height to almost entirely cover the driver would not detract from the appearance of the vehicle, while it would add decidedly to the comfort thereof.

Automobiling is undoubtedly one of the conspicuous evangelists of health. The man who has religion and an automobile ought to be entirely satisfied with his lot. He is an enviable creature, and has no reason to be envious of others. To take a ride in the direction of a good appetite and dreamless sleep and to overtake and capture both is to be victorious in a very important conflict.

But there are limits beyond which this noble exercise becomes irritable and takes revenge. Don't abuse the new locomotion, but treat it with respect and reverence. It is better to ride twenty miles and feel benefited than to cover one hundred in record time, and feel the need of a restorative or a sedative of some kind. What you want is health and enjoyment, and if you use an automobile with any discretion you will get both.

Don't talk about carriages belonging to other people, for they might find it out and act unpleasantly: don't talk about yours, for you will make other people tired, and will become unpopular: don't talk about automobilic things in which you are especially interested, for people will say you are a crank; don't talk of things in automobiling of which you know nothing, for people will say you are ignorant; in fact, don't talk shop.

One of the most amusing features of the opposition to good roads legislation is that it is based on the assertion that such legislation is an attempt on the part of the cities to dictate to the country. The average rural voter sees nothing amiss in dictating legislation year after year for New York or Buffalo, for government

of which he is practically not taxed a penny, but he is instantly in arms when cities suggest legislation for the country, and, as in the case of good roads, offer in addition to bear substantially all the expense thereof. The good roads bill advocated by the Automobile Club of America and its allies should be pressed, if only to show that the cities really have some rights and wishes the country is bound to respect.

"A horse is a vain thing for safety," said the Psalmist; and the character of the noble steed is no better to-day than when the comment was originally made. People who inveigh against the dangers of motor vehicles might study with benefit the statistics relating to casualties caused by horses. Unfortunately there does not appear to be any list available in America; but such a table has been prepared in France, and it may justly be assumed that the Gallic steed is no worse than his American comrade. During the month of February, France recorded 967 accidents with horses, of which 88 were fatal. In the same period of time railways killed 8 persons only, bicycles 6, while automobiles were responsible for but 2 deaths. Automobiles have a lot of leeway to make up before they can overhaul the horse as an accident causer.

Charging 100 per cent. profit is generally considered fairly high, but druggists demand much higher profits on many of their business transactions. Calcium chloride is a compound used by some automobilists as a non-freezing mixture. In large quantities the stuff is worth three-quarters of one cent, but retail sellers generally charge about four cents a pound. A correspondent writing to the AUTOMOBILE MAGAZINE mentions that a druggist asked him 35 cents a pound for calcium chloride, and we have no doubt that many persons have paid that amount. The thing is worth making a note of by people interested in non-freezing mixtures.

An Ohio scorcher having run down an Ohio editor, the class to which the infuriate automobolist belongs comes in for renewed local animadversion, which it well deserves. In Gloucester, England, recently, it was declared that there would be no relief from the motor scorchers making city and suburban avenues almost impassable till one of them had killed a bishop. But perhaps merely

damaging an editor may work some relief in Ohio, subduing the impetuosity of the local scorcher and teaching him the lesson of his obligations to his fellowman.

At the Preston Great Horse Fair, an English institution of considerable antiquity and prominence, the big draught horses, which formerly were sold for an average price of $300, went begging this year at less than $225. It was the consensus of opinion that this type of animal was so rapidly being supplanted by the mechanically propelled vehicle that his breeding would eventually cease, owing to the demand for the animal becoming so limited as to make his breeding no longer profitable.

"In medio tutis simus ibis" applys to automobiling as well as to everything else in life. The upright sitting steersman of a motor vehicle has a chest capacity of 240; he who sitteth over his steering wheel at an angle of 45 degrees a chest capacity of 220; the drooping and degraded scorcher a chest capacity of 210. But what will the scorcher care for these things? He doesn't own or use an automobile to improve his chest capacity, but to enjoy himself in his paretic fashion.

When does a driver know a road? Plenty of automobilists no doubt believe they really know all the good roads encompassed within the district wherein they usually motor. How many of them could sit down and from memory write a reliable and exact description of any particular road, no matter how often they may have gone over it? If you think you are one who can do this, try it and learn how easy it is to be mistaken..

"From the time of our birth to the time of our death and burial the public road is a subject which concerns every man and every family" These words of ex-Gov. Beaver, of Pennsylvania, a clever student of the road problem, tersely illustrates the importance of any movement which looks to the development of a community's highways.

In course of time the man criminal and unprogressive enough to bring a horse into a city may be fined or imprisoned for doing so. The arrival of this enlightened period is not, however, yet in sight.

When you enter into a wordy discussion with another user of the highway over your rights and his there, never forget that the only difference between repartee and impudence is the size of the man who says it.

Germany has set apart $75,000 for the continuation of the experiments with motor vehicles for military purposes. The American Government has set apart for the same purpose—nothing.

Politicians and automobile makers are not backward when it comes to making promises, but they are often slow in coming forward for the purpose of making them good.

It depends very much on what kind of a life you have led what will become of you if your brake refuses to do its duty in the steepest part of a dangerously steep hill.

Diplomacy is making another man believe that you believe that he believes what you say about the vehicle you want to sell him when you know he doesn't.

Many important discoveries have been made during the present century—but the absolutely fool-proof motor vehicle persists in remaining undiscovered.

When you find the owner of a motor vehicle who doesn't worry about its condition, you may be sure there is someone who worries for him.

If a woman has pretty hands and rings she will attempt to steer an automobile whether she ever learns to or not.

Perhaps the best a scorcher can hope is that when he makes a fool of himself he shall not do it too conspicuously.

It takes a very successful designer to draw a large bank check.

In the purchasing of a vehicle beware of a dead-sure thing.

Cheap wheel bearings are works of friction.

(We desire those interested in both the manufacture and operation of Automobiles to send whatever they think may be of interest to our readers.—EDITOR.

To Make Dodging Difficult

I BELIEVE I am only like all other decent, self-respecting users of the motor vehicle in my desire to prevent a few harum scarum, devil-may-care owners of big racing vehicles from injuring the good repute of the automobile.

My own observation has shown me that something must be done to prevent the recklessness of these foolish ones if we are to escape being burdened with restrictive legislation such as will retard the introduction of the automobile as nothing else could do.

As a perfectly feasible method of punishing the guilty without doing the same for the innocent, I would suggest that upon registering at Albany as the law now compels all owners and drivers of motor vehicles to do, a card be issued by the state showing the owner's name, residence, etc., which card every driver of an automobile must at all times carry with him when driving. Now in event of an arrest for violating the law let that fact be endorsed upon the card by the magistrate. For the first arrest let only a caution be the penalty; for the second a fine of say $50, and on the third conviction let the license be withdrawn, a fine imposed and a short term in the county jail be meted out.

The beauty of the plan I have outlined is that each automobilist will at all times carry with him a complete record of just what kind of a road user he is and the magistrate before whom he is brought will by this means be enabled to act intelligently in

apportioning out punishment. I think the first case wherein the extreme penalty I have outlined above is visited upon one of these scorching gentlemen will be the last case. Such justice is not conducive to a desire for responding to an encore on the part of the recipient.

Bay Side, L. I. T. S. COSGROVE.

Principles of Automobile Construction

I WAS fortunate enough to hear Prof. Hutton the other night at the Automobile Club of America, and noted a few of the principles and prophecies set forth. Among them was the advantage of the variable speed of a steam engine, due to varying the cut-off and the desirability of doing away with the clutch in a gasoline carriage.

Now I admit the convenience of control of the steam carriage due to the possibility of control by cutting off and throttling, but there is an economical point for all engines or motors, regardless of the kind of power used. While you do not lose as much in the steam engine by varying speed as in the gas engine, it would be better economy to run it at a constant speed, and vary the speed of carriage by gearing, if the loss in the gearing can be kept within reasonable limits.

I have recently seen a device for varying speeds from six miles and hour backwards to thirty miles ahead, including a zero position with no motion to carriage. There is no step by step motion, but a continuous charge, and the carriage which is using this in its make-up ought to be popular.

It does away with the clutch objected to by Prof. Hutton (although it is practically a continuous clutch itself, but a good one) and I'd be inclined to try it on a steam carriage of any size.

Cincinnati, Ohio. FRANK C. HUDSON.

Thinks He's The Only One

MAY I intrude? I won't take up much of the space which you always use to such an advantage in this portion of each issue. But if you will allow me, I want to tell you of some really remarkable performances I am indulging in without anyone but myself and one small instrument being aware of them. Here is the why and the wherefore.

I stepped into one of those places where motor vehicles are fixed up without pain, the other day, and as soon as I could control myself I asked for the most reliable instrument they had for the measuring and the recording of the number of miles that automobile of mine traveled. The clerk produced one which he said was a perfect Washington for truth and veracity. I affixed it to my wheel and ever since I have been acquiring new ideas in regard to distances. I have said in my haste all such instruments are liars. If some one will invent a brake for mine I should like it. At present it is running double time in spite of overproduction and the gas meter is outdone. Has any other reader of the Automobile Magazine had a similar experience, I wonder?

Moosmore, Me. JAMES G. REDDINGTON.

Individual Charging Plants

To me it seems as though the cleanly, noiseless and neat appearing electric is the ideal one, if only the difficulty of recharging could be overcome. Has any system been devised whereby the owner of an electric carriage can provide himself with a private charging plant without spending a small fortune in so doing?

Denver, Col. R. M. HARTSHORNE.

If the writer of the foregoing wishes to generate his own electrical energy he can do so by purchasing an outfit consisting of a 3 H. P. gasolene engine, generator, switches, etc., for $250, which will supply him with all the current required for the ordinary pleasure vehicle. Should, as we imagine from his address, he desire a motor and generator for converting low frequency, single phase, alternating current to direct current, he can secure such a plant for $100, which will charge the ordinary carriage in from ten to twelve hours with no attention whatsoever. These electric carriage conveniences are both made and sold by the International Motor Car Co., Indianapolis, Ind.

The owner of a motor vehicle is startled sometimes when he thinks of his former ignorance; but he generally feels that his present knowledge is ample.

The mistakes of other automobilists do much to inspire us with confidence in our own ability.

New Jersey's Model Establishment

WITH the completion of the building here shown, the New Jersey Automobile Company will have one of the most complete establishments of its kind in this country. The plans call for something over 16,000 square feet of floor surface, to be divided up into show room, storage room, salesroom, reception room, reading room for patrons which will contain a complete file of all the automobile trade papers, assembling room, offices and private office, locker room and dressing room, baths and shower baths, and reception room for ladies.

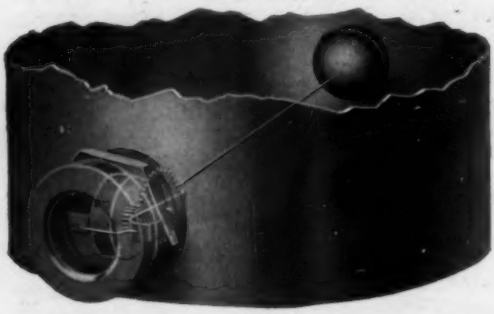
The repair shop will require 1,200 square feet and will be equipped with lathes, drill press, condenser, etc., etc. The N. J. Automobile Company running its own electric light plant will be in a position to charge six electric carriages at once. This will be the most thoroughly equipped motor vehicle repository in New Jersey, and it is questionable if its equal will be found elsewhere in the United States. The New Jersey Automobile Company carry in stock the Autocar, the Baker Electric, the Spaulding, and as general agents are correspondents for all of the well known makes. Besides the vehicles themselves, a full line of parts as well as all the regular automobile specialties are carried. Touring automobilists will be made welcome at all times, the building at 226-230 Halsey street, Newark, N. J., being open night and day.

The Most Interesting of the "Talks"

Among the most interesting of the weekly talks which have been given at the Automobile Club of America and the Long Island Automobile Club, has been that of Rollin White on the vehicle which bears his name, and whose performances have been among the sensations of a sensational season. Not only is Mr. White thoroughly at home in all relating to his own boiler, the semi-flash one, but in his remarks upon the Serpolet system he showed that the Frenchmen had done nothing which the American did not appreciate, and could not himself have done had he not preferred to follow his own original ideas in designing and constructing.

Shows Gallons at a Glance

ACCIDENTS will happen, and the worst part of their happening is that they invariably select such unsuitable times and places for doing so. For example, did you ever notice how the discovery of a nearly empty fuel tank was always sure to occur when you were at the point furthest removed from an available supply station? Usually the character of tell-tales is not so sufficiently praiseworthy as to warrant commendation, but here is an exception. By the use of the instrument, here shown, the tale of the gasoline supply is told accurately and promptly, without any danger from bursting gauge glasses, or other similar unpleasantnesses. On a dial beneath a heavy glass is at all times shown in large figures, the exact number of gallons of gasoline remaining in the tank, thus making the ingenious little device one few users of steam vehicles can afford to be without. The John Simmons Co., 106 Centre street, New York city, are the makers.



Carried Nine Men Up

NOT without reason has it been held that the supreme and the final test of a motor vehicle is ability to surmount grades. Judged by this, then, the National Electrobile has a license to claim first honors. At the recent Indianapolis show, just to prove what the vehicle could do in grade climbing, nine men were crowded into a vehicle supplied with a 2 H. P. motor capable of a 6 H. P. overload, and the National vehicle carried them safely. and swiftly up a distance of 160 feet at a grade varying from 19 to 25 per cent. When it is remembered that all other vehicles claimed at least 8 H. P. to carry only two passengers up this same incline some idea of what a wonderful performance this was of the Indianapolis made vehicle may be gained, and naturally its manufacturers, the National Vehicle Co., are somewhat elated over the performance.

The New Passenger Carrier

LONDON'S famous buses and the quaint characters, who for many years have held the reins over the horses which drew them, are to be replaced by this. The new vehicle is built by Thornycroft, uses coke for fuel and seats thirty-six passengers. An average speed of eight miles per hour is maintained through crowded traffic and unfavorable weather, thus leaving the horse-

drawn vehicle far in the rear. Within the four-mile radius from Charing Cross there are plying year in and year out some 2,500 omnibuses and about 12,000 hansoms. The omnibuses carry about 350,000,000 passengers yearly, but they are hideous contrivances, intolerably cold in winter, intolerably stuffy in summer. It is they who set the pace for the rest of London, for they are big, lumbering, difficult to pass and constantly stopping to take up passengers.

Made by French in St. Louis

THE St. Louis Motor Carriage Company may have not made as much noise as some of their competitors, but they have made a lot of real progress in supplying the public with a very serviceable motor vehicle. The new 8 H. P. St. Louis, which is now coming through in goodly numbers is cheap at $1,100. In this their latest the Messrs. French have made some radical improvements. They have made some changes, but have not sacrificed any of the virtues of their well-known single cylinder engine. One of these changes is doing away with the magneto and substituting jump coil ignition therefor, to which is coupled a double set of batteries. The cylinder and head are now all in one piece and all the gearing runs in oil, and a perfect alignment of parts is absolutely certain. The latest type of spring suspension is supplied in the new model, and is a patented feature of the St. Louis carriage.

For the Comfort of Tourists

In connection with its greatly improved machine shop, the Newport (R. I.) Engineering Works has provided a special reception room for automobilists. This room will be directly over the office of the company, and will have on file the New York daily papers as well as the local papers; also the principal marine, yachting and automobile journals. The room is situated on the water side of the building, affording a fine view of Newport harbor and a pleasant cool spot where one can read the papers, write letters, etc. All mail matter or packages sent to automobilists in care of the Newport Engineering Works will be delivered when possible, or if the tourist has proceeded on his way, but his address has been entered in the address book, the mail will be forwarded. Otherwise letters will be on file where they can be readily found by their respective owners. A telephone and other facilities will be provided. The use and advantages of this room will be entirely free to all yacht officers and automobilists, and they will be welcomed at any time.

At the beginning of the present year two thousand and forty automobiles had been declared to the authorities in Belgium. This total is made up of 1,364 cars, voiturettes, and delivery vans, 609 motor tricycles and quads, and sixty-seven motor bicycles and tandems. The province of Brabant heads the list with 917 automobiles.

The Modern Trolley Ambulance

Though the Englishman had to learn from America of the trolley's advantage over the horse car, he has not had to receive any education from the same source on the advisability of making the supplanting complete. So while America, the home of the trolley, yet depends upon the horse for motive power, to carry around the ever necessary repair wagon, the Englishman, more progressive, has come away with his improved wagon, of which steam is the power and coke the fuel. At the end of six months' employment, the new vehicle has been found to perform the work required of it, not only more quickly, but $770 per year cheaper than the horses it supplanted. In view of the success thus attained it would seem as though it could not be long before the improvised wagon was adopted by the American trolley companies.

Good Roads' Movement

As having lead to better roads,
The auto is much defended;—
The way of true love, never smooth,
Though it is vastly mended.

It is urged that indulgence in motor scorching makes women ugly; so that handsome is as handsome doesn't.

A Most Complete Establishment

THE premises known as Niagara, in London, which has a floor space of over one acre, will henceforth be used as a show room and storage station for electric vehicles only. The English company which have acquired the property undertake, for a certain annual charge, which is based upon a percentage of the price paid for the vehicle, not only to store it and do the recharging, but also to keep the batteries, motors, and all parts of the vehicle in good order, and to supply new ones when they are required. By an insurance system they are enabled to make good even injuries due to accident, and a purchaser of an electric vehicle knows that beyond paying therefor in the first instance and the subsequent fixed storage charges he has nothing further to trouble about, and will always have his conveyance ready when he wants it. This idea would survive importation to America.

INDEX TO ADVERTISERS